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Report on the Excavations at Stonehenge during 1925 and 1926

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As the periods during which excavations at Stonehenge were continued in the seasons of 1925 and 1926 were short, it has been considered better to give the results of the two years' work in one Report.

Work began on 1st May 1925, and was continued until 8th September following. The portion of the ditch opened was that remaining between two other excavations in the ditch previously examined and reported upon. It formed part of the general excavation of the eastern segment, but as it was essential to complete the exploration of the interior between the rampart and stone circles separately, the ditch in that quarter was left for later investigation.

The part of the ditch taken in hand began at the south end of a short piece opened in 1921 when we were approaching the main entrance, behind Aubrey hole no. 4, and the work progressed from this point by successive sections, often 10 ft. in length, but varying according to circumstances, until we reached the first section we had cut, behind Aubrey holes nos. 13 and 14. Here the depth of the former section had been 65 in., but in the new cutting there was a sudden rise of 1 ft., and 10 ft. farther on the depth decreased to 52 in.

The humus, or upper layer over the centre of the ditch, was 20 in. in depth and contained the usual mason's chips, of which one piece of rhyolite showed signs of use in having been intentionally smoothed. There were three pieces of Romano-British pottery in the humus, and on the surface of the silt below it

there were ten associated small pieces of Beaker pottery. Remains of a stag's antler and a few fragments of animal bones were found at 33 in. below ground-level, and on the bottom there were a few pieces of the tops of antlers. Flint chips were plentiful all along the bottom, but there were only four that showed definite signs of working and these were found in the stratum of flint chips which is nearly always present on the floor, generally in association with chalky mud. On the east side of the floor a small depression was noticed, looking like a shallow post-hole.

In the second section the upper layer was 16 in. deep above the centre, and contained the usual chips and the handle of a Romano-British pot. There were four fragments of stag's horn and many flint chips on the bottom. The depth of the ditch continued the same but the width increased from 5 ft. 6 in. to 9 ft. 6 in., and the width of these cuttings was about 12 ft. at the top.

The third section was similar to the last. The upper layer gave nothing interesting and was the same depth as before; mason's chips, however, were rather more plentiful and there was one piece of Romano-British pottery. The silt layer was normal, and at 33 in. below ground-level there were animal bones and part of an antler. On the bottom there were some roughly worked light-coloured flints, and a roughly dug longitudinal depression containing only dirty loose chalk.

In the fourth section the upper layer was 15 in. deep and contained mason's chips, potsherds of the Romano-British period, and others of a rather earlier date, one small piece of Beaker pottery and about twelve roughly worked flints. The silt was normal at the upper part, but a little below it on the rampart side there was a descending patch of white chalk reaching to the middle, under which the silt again became normal. These appearances, like others noticed on former occasions, are worth recording, as they may mark the period of making the Aubrey holes, the chalk seen in the stratum being possibly superfluous matter taken from the holes. There was a dark layer nearly on the bottom which was mostly humus with black ashes of wood in it. This layer rested upon a sort of double bottom, the actual floor of the ditch being 9 in. below it. The objects found here were two decayed fragments of picks, five pieces of bone, including two from the jaw of an ox, and a few worked flint chips on the bottom. There was a recess of irregular shape and width extending diagonally about 10 ft. across the bottom of the ditch. It varied in depth from about 9 in. to a foot and had a foot-pressed floor of muddy chalk with a similar layer over it, marking the actual floor of the ditch. Parts of five stag-horn picks and many

smaller pieces of horn were found. It is probable that there had been a rounded recess here with projections from the banks, as slight traces of them were noticed. The actual depth of the ditch was 4 ft. 9 in.

In the fifth section the upper layer was 17 in. deep at the centre but contained nothing of interest. There were no objects in the silt worthy of notice, but at the bottom there was a thick layer of hard yellow chalky matter resembling compo extending from side to side where the recess in the last section ended; perhaps it had been a barrier afterwards removed. A mass of cremated bones was found on the rampart side of the ditch about a foot above the bottom. These bones were in a bowl-shaped cavity excavated partly in the silt and partly in the solid chalk of the side. Later it was found that a cutting had been made at the top of the side 5 ft. long and 5 ft. wide, the dimensions growing less until the cavity below was reached. It would have been necessary to make this cutting large when sinking it so deep. The cutting being partly in the silt, showed that it had been made after the ditch was filled up. There was a large rough block of flint placed over the cremated bones, but there was no object with them and but a few traces of burnt wood.

In the sixth section the depth of the upper layer was 18 in. A modern trackway had once passed into Stonehenge at this spot, and the top of the humus had many worn flints beaten into it, but below these it was normal, containing the usual chips and six pieces of Romano-British pottery. There was a collection of Beaker pottery in the top of the silt consisting of twelve small associated pieces. The silt below afforded nothing of interest. The ditch here showed a slight curve with short projections on either side. The width at the bottom was 9 ft. and the sides were very steep; they have shown more or less unusual steepness from the beginning. The depth varied from 40 in. to 50 in.

In the seventh section the upper layer was 16 in. deep, yielding, besides mason's chips, about a dozen rough hammer-stones, twelve pieces of Romano-British pottery, a few of which were pseudo-Samian, two Romano-British horseshoe nails and a modern pipe-bowl. Nothing was found in the silt layer under it except a fragment of animal bone at 22 in. below ground-level and near the centre. The floor of the ditch here had a sudden rise and then immediately dipped again; probably another barrier had once traversed the high part.

In the eighth section the upper layer was about the same depth as in the last section, but with few mason's chips. There were four rough hammer-stones, seven pieces of Romano-British pot-

tery, and two of a coarse gritty ware. The ditch here was only 4 ft. 6 in. in depth and the silt was shallow, containing little except a piece of fine gritty pottery, brown on the surface and black inside, which was found 15 in. from the rampart side and 10 in. above the bottom. This potsherd may have descended from above, as it was not far from the side, and the descent may have been assisted by burrowing animals. On the counterscarp an adult cremation was met with, having in it apparently all the bones left of the burnt body: sometimes only a portion of them has been present. They were in a bowl-shaped cist about a foot wide at 22 in. from the surface, three parts of the cist having been sunk in the solid chalk and the remainder in the silt, the downward cutting being plainly visible. A few charred teeth were present, but no object had been buried with the bones.

In the ninth section the depth of the upper layer was 14 in. and it held very few mason's chips. It contained one flint scraper, two rough hammer-stones, five pieces of Romano-British pottery, a piece of chalk with a hole bored through it (not a whorl), and a smoothed oval implement made of quartzite. There was nothing actually in the silt, but near and on the bottom there were bone fragments of ox and pig, and three roughly rounded worked flints in the chip stratum. Towards the end of the section a deep, irregularly formed cavity appeared in the chalk on the side, extending to 2 in. from the bottom. It contained nothing but humus and dirty soil, and might have been made by animals or by the roots of a tree growing there.

In the tenth section the upper layer, 15 in. deep, contained, besides chips, the following objects: 7 roughly worked flints, 2 small pieces of animal bone, a human molar tooth, 1 piece of pottery of the Bronze Age, 4 pieces of the Romano-British period, and 10 of a coarse black ware of a previous age. At the bottom of the silt there was the blade-bone of an ox, part of a large leg-bone, perhaps of the same animal, and three worked flints in the chip stratum. A large ridge extends from the rampart side, descending into the middle of the section, and beyond it the floor of the ditch is stepped up to a higher level. The depth of the ditch here is 4 ft., of which 33 in. are silt and 15 in. humus. The width is 9 ft. 6 in. with steep sides.

In the eleventh section the upper layer was the same depth as in the last section, giving, besides chips, the following objects: 6 rough flints, 2 oyster-shells, 1 small coin of Constantine the First, about 20 small fragments of a jug of New Forest red-ware, and 5 other pieces of dark gritty ware of an earlier period. In the silt there were some bone fragments of a large animal, pro-

bably an ox, and occasional smudges of black matter with wood ash, indicating a fire. There was a layer of loose chalk in the upper part of the silt, similar to that mentioned in the second section as having come from the Aubrey holes. This layer occurs in the same position along the rampart side but often in quantities hardly noticeable, and is occasionally absent. There was nothing on the bottom except the usual flint-chip layer with foot-trodden, chalky mud. The bottom deepened a little at first and then nearly recovered the previous level. Depth here is 3 ft. 8 in.

In the twelfth section the upper layer was 13 in. deep, and immediately below the turf there was a small illegible Roman coin. The number of mason's chips was small and there was pottery of the Romano-British period in small fragments, some of them being fragments of the red-ware jug of the last section, also a Romano-British horseshoe nail and pieces of broken hammer-stones. On the silt the line of chalk (possibly from Aubrey holes) passed across the ditch to the opposite side and had a good deal of yellow hard chalk on the surface. Towards the end of the section there were indications of an ancient excavation having been made in the silt, which had been removed and replaced by dirty gravelly matter. This disturbance must have taken place at an early date, as it began under the white chalk layer near the top, and the silt had accumulated afterwards over both. The total depth here is 3 ft. 9 in., the width 9 ft. 3 in. The sides are steep as before.

In the thirteenth section the upper layer was 14 in. deep and besides mason's chips contained the following objects: eighteen small potsherds, eight of which were Romano-British and the others of an earlier period, and a piece of Norman pottery. The silt was about 31 in. deep, increasing a little in depth. Nothing was found under it except a worn stag-horn pick, a large tine, and chips in the bottom layer. There was some white chalk upon the top of the rampart side above a wide groove cut in the chalk towards the vallum. There was a notch in the side of the ditch under this spot, looking like a foothold for any one leaving the ditch.

In the fourteenth section the upper layer varied from 15 in. to 20 in. and there were more mason's chips than usual. The pottery consisted of 5 Romano-British pieces, 9 of an earlier period, and 2 Norman fragments, also 5 worked flints and part of a dog's jaw. Below the silt a large low barrier of natural chalk extended across the floor, which was followed by a crater-shaped recess towards the east, to which the floor descended. On the bottom the flint-chip layer was almost absent, but a good

scraper was found there. The recess in continuation of the crater was quite a large one, occupying the entire width of the ditch, which had here become 10 ft. across and was of considerably increased depth. There was a cremation in the east side of the ditch, introduced from above, as described in the eighth section. It contained a large collection of bones of an adult and there might possibly have been those of a child included, as some pieces of skull were much thinner than others. There was no object amongst the remains nor ashes of burnt wood. Half of the cavity was in the silt and the other in the solid chalk of the side. The bones were a good deal cemented together by liquid calcium carbonate which had percolated through them from the chalk covering them, which had fallen off the sides. Perhaps they had been enclosed in fabric or some substance that had decayed, leaving a void over them. The width of the cist was 17 in. and the bottom of it, which was flat, was 40 in. from the surface. About 2 ft. to the south another cremation similar to the last was found, the two excavations nearly touching one another. The latter cist had been cut mostly in the solid chalk, and so little of it projected into the silt that it was nearly missed. Like the last, it contained probably all the burnt remains of the individual, who would appear to have been a young adult, possibly female. There was no object of any sort with the remains, but a few wood ashes were carefully sifted in case there might have been beads or anything not easily discoverable. This precaution is always taken after the removal from cists.

In the fifteenth section there were hardly any mason's chips in the upper layer, which was rather irregular and 17 in. deep. There was a patch of burnt matter at one spot low down, partly in it and partly in the soil below. The burnt matter was mostly in a thin layer, sometimes attaining a thickness of 4 in., and was about 30 in. in extent. In it was a piece of very coarse pottery, probably of the Bronze Age, having an incised line-marking on it. This piece of pottery was found at the junction of the upper layer and the soil below, and on the same level a few feet south of it another similar piece, but with no marking, was discovered. Near by there was also found a piece of rhyolite $2\frac{1}{2}$ in. long, axe-shaped, but capable of being hafted for a chisel; the front edge of it was round and had been rubbed smooth. The silt produced nothing except two pieces of stag's horn and a few worked flints, all of which were on the bottom at the side. The silt filling the cavity was of a deeper colour than usual, owing to mixture with earthy matter, and had no definite stratification. The ditch here had become very irregular, being a good deal interrupted, and

altogether presented a very rough style of digging. From opposite the fallen stone on the rampart for a distance of about 20 ft. the counterscarp side receded and ran 20 ft. to another inward curve forming a long deep recess out of the circumferential line of the ditch, and this was stepped down from the barrier and narrow part of the ditch lately passed.

In the sixteenth and seventeenth sections, owing to the irregularity of the ditch, the cutting had to be continued over a larger area. The average depth of the upper layer was from 16 in. to 18 in., and the number of mason's chips and objects is given entire, viz.: quartzite 19, sarsen 32 (including 2 large pieces), rhyolite and diabase 102, micaceous sandstone 2, and oolite 1. Pottery fragments were numerous: 70 Romano-British, 30 of coarse black-ware, mostly of the Bronze Age, and a piece of a Bronze Age pot larger than the other fragments. One piece of rhyolite had been fashioned to the shape of a very rough axe and afterwards broken. There were also an oyster-shell and part of a ground quartzite axe. The soil of the cavity below the upper layer afforded hardly anything. There was a piece of cranial bone of a goat or horned sheep at 28 in. below ground-level, in other places a few small fragments of animal bone and one or two worked flints, but the ground was nearly devoid of flints of any sort. The soil, or silted matter, was different from that usually found and had in it small masses of hard chalky clay compo. It had not the usual curved stratification, and, indeed, there were hardly any curving lines in it. A stratum of dark earthy matter occurred near the bottom, varying from 3 in. to 8 in. in thickness, which had the appearance of decayed vegetable matter, possibly with some wood in it, and there was also a good deal of chalky clay compo. The dark matter contained no object, and below it there was sedimentary chalky mud 6 in. thick, such as is usually found on the bottom, but without the flint flakes. The depth of the silted matter on the east side was about 34 in., and on the rampart side 42 in. The depth of the ditch on an average was 5 ft., except at a short depression where it was 5 ft. 6 in. The greatest width was 15 ft., but the width varied constantly within narrow limits. At the beginning of the sections the counterscarp side suddenly receded at the end of a crater, or bay, towards the opposite side, curving in that direction to form another bay sloping westward, but not so long as the previous one on the east. The re-entry in this westerly direction was rather inside the circumferential line. A shoulder or broken barrier projected from the side into the ditch about half-way across the bay. The

state of the ditch here gives the impression of having been disturbed, but at what period it is difficult to say, as the mixed matter taking the place of the usual silt gave no object which might have helped to establish a date for it. It could not, however, have been very late, as the upper layer was normal and the objects in it were not continued downwards. The dark vegetable matter so low down is inexplicable, especially as it occurred over a normal original bottom.

In the eighteenth section the upper layer was 20 in. deep and gave the following objects in addition to chips, namely, five pieces of Romano-British pottery, two of Bronze Age, and a flint hammer-stone rough with use. A large piece of sarsen was found embedded in the silt, weighing about 40 lb., and a similar fragment in contact below it. Close to them, at 27 in. below ground-level, there was burnt matter about 18 in. in extent. Quite near and at the same level there was a large rough piece of rhyolite, shaped like an axe-hammer. The discovery of this so far from the surface might lead to an inference that the foreign stones were here at quite an early date, but it should be taken into consideration that this is rather a disturbed spot. The soil here below the humus is loose and the conditions observed in the last section are continued. The mixed soil taking the place of silt was a sort of chalky humus and was unstratified, containing nothing beyond a few small fragments of animal bones. The floor now took a sudden incline upwards from a chalk barrier on the ditch floor farther south, making the ditch here 4 ft. deep. The width had contracted to 9 ft.

The nineteenth section was made 17 ft. long as it was the last part of the ditch that had to be excavated. The upper layer varied from 14 in. to 17 in. in depth and contained very few mason's chips. There were six rough flint hammer-stones, nine pieces of Romano-British pottery, and part of a La Tène fibula of late period. There was a very small collection of cremated bones at a spot over the centre of the ditch, covered with brown humus and placed in a small cup-like recess scooped in the chalky silt in the layer below, at a depth of 17 in. to 20 in. In the same area a few human unburnt bones were found at a depth of 17 in. to 22 in., and with them a small number of animal bone fragments. About a foot north of the bones, and at the same level, there was a thin slab of rhyolite 1 in. thick and 9 in. wide. Close beside it was a broken rhyolite axe, roughly made, and something like the one found in the last section, but it was broken and the shape spoiled. There was a slight black stain of a fire near this spot. The silt was not so earthy as it had been lately, but it did not

altogether resemble the normal silt of the ditch elsewhere and there were no objects of any sort, except those embedded in it at the top, which actually belonged to the upper layer. The floor now rose rapidly, ascending from low footings of barriers projecting into the ditch. The usual collection of flint flakes in the muddy stratum at the bottom was noticed at only one spot, about 2 ft. in extent, and had been little seen since entering the disturbance in no. 17 section. Humus had here fallen down the sides and there was no loose frosted chalk upon them, which seems as if the ditch had been filled early in this shallow part of it. The average depth of humus was 13 in. to 14 in., depth of silt 25 in. to 26 in., and average depth of ditch 40 in., width at bottom 6 ft. 6 in. and top width about 9 ft. 6 in. It will be seen from these measurements that a rapid change came here in all dimensions. This ends the ditch excavation.

Regarding the cremated remains (pl. xxiv) it might be well to consider all the occurrences of them that have been met with, both on this and on former occasions. That they were interred later than the date of the ditch is evident from their partial burial in the silt and from their being found also on the interior slope of the rampart which was formed by soil cast out of the ditch. The greater number of them has been found on the east and south-east: some have been found as far north as in the ditch west of the main entrance, and there were at least two instances of them there on the edge of the causeway where the ditch begins. Perhaps they may some day be met with beyond that spot, but probably not far beyond it, as the people they belonged to seem to have had a superstitious reason for selecting the eastern area.

They were found on the east side as far south as the causeway lately discovered there, but not beyond the western side of it, except in the Aubrey holes, but in those last excavated farther to the west they were absent. With the exception of these they have been found in all the others from hole X2 in the main entrance all the way round to the south-west, except in hole no. 19 where there was a dump of white flint flakes discarded by an implement maker. In all instances there had been no attempt to bury in an urn, not even in the Aubrey holes, where there was plenty of room for one, and in soil already loose and needing no toil in digging. What appearance the burials originally presented in the holes we do not know, as they had all been disturbed, but in other instances they had been buried in plain cists, often not bigger than a saucer and quite near the surface, and possibly contained in some sort of receptacle such as a skin or piece of fabric. A peculiarity about the interments was that in the greater number of cases there was

hardly any burnt wood ash present, showing that the bones had been carefully taken out of the mass of the fire after it had cooled.

There was far more wood ash with the burials in the Aubrey holes, which in most cases (but not in all) seemed to contain all the bones, but in every case they had apparently been brought from a distant place for interment.

Another peculiarity was the dearth of objects found with them, which (and in one or two instances only) consisted of long bone hair-pins burnt with the body. No object had been intentionally buried with any of them, except in the instance of the cushion mace found in a small shallow burial at the base of the rampart slope in 1924. As they were buried when the ditch was silted up, they came later than it, but having no definite clue we cannot tell how much later. Presumably they are of the Bronze Age, but even about this there is a doubt, for Mr. Crawford mentions the case of a mace-hammer of the same type being found in a cairn of the Neolithic Age in Scotland with an unusually early burnt interment (*vide* Report of 1924). Then again it should be remembered that Aubrey hole no. 19 contained neolithic chips, purposely thrown into it, and at a high level of the soil in it; this showed that whatever the holes had originally contained had been taken out and that they had become almost filled up, as they certainly were when the cremated remains were put into them. When the Aubrey holes were first found it was considered that they had held a circle of standing stones, but there is a case now for supposing that they held wooden uprights. This is owing to a remarkable discovery of a circular earthwork and ditch near Durrington Walls, where Mr. and Mrs. Cunnington have lately found circles of holes which undoubtedly held wooden uprights, some of which correspond exactly to the original conditions of the Aubrey holes.

On 8th September 1925 a little digging was begun inside the Stonehenge Circle where there was a small area offering no impediments, most of which could be safely worked without interfering with any of the standing stones. It was towards the north of the circle, between the fallen stone and lintel of the fifth trilithon. By beginning late in the season we avoided interfering with the enjoyment of the place by summer visitors, for it had to be railed off. An area 8 ft. square was at first laid bare, but soon extended farther to the north. The upper layer was from 13 in. to 15 in. deep and ended upon chalk, some of which was natural and some of it disturbed and beaten down, so that it was hardly distinguishable from the natural. The layer above consisted of quantities of broken angular pieces of flint,

mostly small, which had been broken from hammer-stones when in use, of which mention has been made before. They were mixed with dark dirty earth. Mason's chips were very plentiful and were mostly those of the foreign stones; there were also hammer-stones, a few pièces of Romano-British pottery, and quantities of modern remains, such as broken crockery, glass, and tobacco pipes. The place did not appear to have been disturbed by recent excavators, but it is known that there was once a hut standing here owned by a man who used it daily for the sale of beer and other things to visitors, so some of the numerous holes that were found might have belonged to the hut. There were a great many holes of all sizes, many of which were of early date, resembling those met with outside the circle on the south-east. One was a large well-cut hole 32 in. deep and 13 in. wide containing fine grey chalk and three pieces of sarsen about 4 in. thick, but no foreign stone. A little to the north was another hole which had been transformed into a shallow, shapeless depression 23 in. deep, which was full of humus. A little to the south of it there was another similar to the first, but not quite so deep, and close beside it another like it; both were 27 in. deep and contained earthy chalk, and one of them a piece of sarsen. Some holes looked as if they had been interfered with and enlarged, and one was big enough to have held a small upright stone. In other places the natural chalk looked as if it had recesses in it which had been filled with hard beaten chalk. The work ceased after only a few days, as I had to leave for Sussex, and there had not been sufficient time to make a safe record of anything of special interest, so the place was filled in with the intention of continuing the work in the following season.

SEASON OF 1926

In the following season work did not begin until 1st July, and was continued until the early part of September. Mr. Newall and I began by making another excavation of the ditch and afterwards resumed the investigation of the spot within the Stonehenge circle which had been abandoned the year before.

The work in the ditch began at a point west of the south causeway behind Aubrey holes nos. 21 and 22, where about 18 ft. had been excavated soon after the causeway was found. Progress westward was made by sections which were of varying lengths owing to the uneven state of the ditch. In the first section the turf was stripped from the top for a distance of about 20 ft. The upper layer varied at the middle from 14 in. to 18 in. farther towards the west. Considering the length of the section, objects were few, consisting

of 148 mason's chips, thirteen potsherds, including Romano-British coarse ware and one piece of the Beaker period.

Afterwards the silt below was examined. The top part, usually grey or whitish in colour, was in this instance brown, but became lighter lower down; it contained, however, nothing of the Stonehenge period. The silt descended to 48 in. from the surface towards the west, where it was rather deeper than it was at the point where we began. At the end of the section there was a fire stain, upon a layer of white chalk, about 4 in. in thickness, covering a hard stratum. At first this was taken to be the bottom, but the actual floor was found 9 in. below the fire stain, so that there were strata of two distinct periods. The fire stain was about 2 in. or 3 in. in thickness and 4 ft. by 2 ft. in lateral dimensions, passing somewhat diagonally across the ditch. Half of a flint axe, rough but well shaped and chipped, was found towards the north end of the fire stain, and on the same level and about 2 ft. from it there was a roughly rounded flint implement and two rough cores. In the browner silt and at a higher level there were a few bone fragments, probably of ox.

During the progress along the bottom, six stag-horn picks and two upper parts of antlers were met with, one pick being found at the middle and the remainder at the sides. There were no flint flakes found actually on the bottom, but there were some in the silt a little above it. About 5 ft. south-east of the fire stain there was a recess that had been excavated in the chalk side at the south, measuring 2 ft. wide and receding inwards 20 in. On the floor in front of the recess and close below it there was a roughly cut hole 8 in. deep and 1 ft. wide, but the use of neither of these could be determined. In the stratum of chalk below the level of the fire stain there was a small long hole 2 in. to 3 in. in diameter, apparently the core of a long stick which had decayed and was traced for 55 in. up to where the section ended, and continuing beyond it. There was also another core extending from the first which ran only a short distance.

This section ended at a semicircular recess or bay 6 ft. 6 in. wide with projections on both sides.

The next section was shorter. The upper layer was of the same depth as before and contained forty-four mason's chips, seventeen very small pieces of pottery, some of which were Romano-British, others of an older period. A ball of ironstone was found partly embedded in the silt and partly in the upper layer. It was very carefully made and almost accurately round. A small implement of the lower ditch pattern was found in the humus layer, but might have been brought up by the burrowing of rabbits, of which

there were traces here. Little was found in the silt layer except some dispersed fragments of animal bone in the higher part, small fragments of stag's horn which might have been struck from picks when being used, and a few roughly worked flints.

From the semi-circular recess of the last cutting the floor was stepped up 4 in. over a low barrier across the ditch which ended in

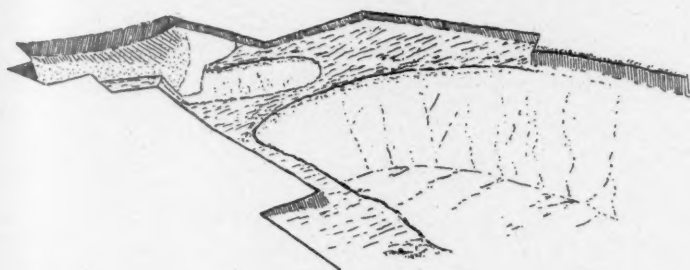


FIG. 1. Ditch looking west showing circular hole beyond solid chalk barrier behind Aubrey hole no. 24.

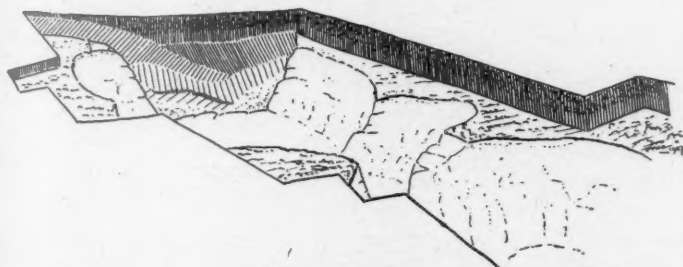


FIG. 2. Ditch showing section between recesses and part of the circular hole in foreground.

projections on the sides, suggesting that the barrier had once been higher but had been removed. Little was found on the ditch floor except a piece of stag's antler, lying close beyond the end of the last section, and one or two imperfectly worked flints, but the usual chip stratum over the bottom was absent. The core of the decayed stick seen in the last section was continued into this one, but ended after a short distance.

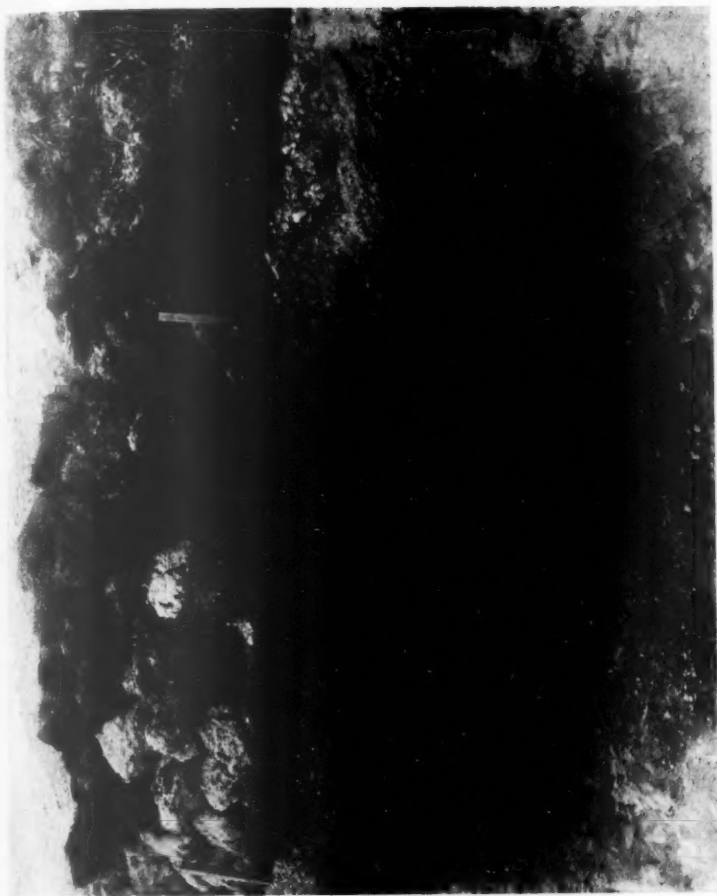
The next section was of about the same extent as the last and produced forty-two mason's chips, one of which was a piece of rhyolite with worked and rounded edge, sixteen pieces of pottery, most of which were very small and Romano-British, with others of

indefinite age. On the top of the silt and at the centre there was a small piece of human skull. The depth of the silt here was 3 ft. 4 in. and the depth of ditch 4 ft., while the width was 6 ft. 6 in. A fine stag-horn pick was found on the bottom resting against the south side of the counterscarp, and fragments of animal bone were met with occasionally dispersed in the silt, but were of little account. A much-used rough flint implement was found at 1 ft. from the bottom in rather earthy silt, and at the same level a piece of chalk roughly cut to resemble a ball.

Flint chips in the bottom stratum, which had been nearly absent before, appeared again here and were found in foot-pressed chalky mud. A fire stain was noticed at 7 in. from the bottom with brown chalky silt around it: it was somewhat circular in shape, being a foot wide and $1\frac{1}{2}$ in. thick. It contained nothing, but in some chalk rubble between it and the bottom were a few flint chips.

The next section completed a straight piece of the ditch about 18 ft. in length from the last barrier, ending with an inward curve at 42 ft. from where we began. The upper layer gave thirty mason's chips and fourteen small pieces of Romano-British pottery.

The silt was rather earthy, but less so towards the bottom. At one place a fire stain was noticed 14 in. above the bottom on the north, but neither it nor any other part of the silt gave anything interesting. At the end of the straight length of ditch a solid chalk barrier 3 ft. wide was encountered (fig. 1) traversing the ditch from north to south, and it was virgin soil from the top downwards. The existence of this barrier had been known already by probing, and there were indications possibly of another farther west of it. Turf was taken from the surface for 14 ft. in advance, when it could be seen that there was a circular hole (figs. 1 and 2 and pl. xxv) to the west of the barrier occupying a little less than the usual width of the ditch. The humus of the upper layer was very thick over the hole and contained thirty mason's chips, amongst them one piece of sarsen which had a smoothed side and might have been a Romano-British hone. With the exception of a few fragments of animal bone nothing was found in it. The upper part of the silt gave little except an occasional fragment of bone, but on the bottom there were a good many flint chips, and a well-formed flint implement 3 in. long with a rounded front edge, the chipping on it being continued along both sides. There were also two large pieces of the upper ends of antlers, one of which was patinated and a good deal burnt. The width of the hole was 6 ft. at the bottom, and from there to the surface it formed a nearly circular hole. Up to this spot the early digging of the ditch had been done in a roughly straight line from where we began, inclining northwards into the



Cists cut in the bank on east side of ditch between the silt and the chalk



Ditch looking east, showing the two barriers with gap in nearer circular hole between them

slope of the vallum and passing within the normal circumferential line of the ditch. Many parts of it appear to have been made with similar straight cuttings which when seen in succession roughly conform to a circle but make up in reality an irregular polygon.

Another area farther west was stripped and the turf found to be very thick over a large wide bay. The humus of the upper layer descended 27 in. at the middle of our excavation, and there were mason's chips in it to that depth. The entire upper layer contained 50 mason's chips, 2 quartzite hammers, 2 flint hammers, 4 roughly worked flints, and 4 flint flakes, about three-quarters of a chalk spindle-whorl showing the central hole, part of another also with a hole, and a rough flat piece without a hole, perhaps an unfinished one: they were probably of the Romano-British period, and there were eleven pieces of Romano-British pottery and one of the Beaker period. The soil below did not appear like the ordinary silt, but as earthy matter with a little chalk in it. Further excavation showed a bowl-shaped cavity to have been made in the usual silt filled with the brown matter just mentioned. At the bottom of the cavity, which was practically the ditch bottom, there were many pieces of a very large ox skull. Some of them were put together by Mr. Newall; expert opinion identified them as belonging to an adult of *Bos primigenius* and a calf. Near the skull traces of a fire were seen and in it fragments of charred wood, the black stain of it extending up the south-east side of the cavity. The bowl-shaped recess contained no mason's chips nor anything of the Stonehenge period, showing it to have been pre-existent, and as it had been dug in the silt it must have been made at a time when the ditch was either nearly or completely filled up.

On the ditch bottom there were a good many flint chips in the usual muddy stratum and a large thick horn pick with the front side worn away by use. When all the silt had been taken out, the place proved to be a very wide oval-shaped bay separated from the preceding section by another chalk barrier which we passed when entering it. It traversed the ditch in the same way as the last and was similar to it except that at the centre there was a gap 3 ft. wide at the top and 18 in. deep, ending on the barrier about 20 in. above the bottom of the ditch and descending at an abrupt slope into the bigger bay. On the west there was a diagonal ridge across the floor, forming a rather long, narrow bay which was actually a part of the big one and the widest part of it. West of this there was another low barrier from side to side of the ditch, which was stepped into a long bay at a much higher level than the last. The silt in it contained many lumps of yellow chalky compo, and on the

bottom there was a much burnt antler and two horn picks, but there were very few flint flakes in the lowest stratum. More of the top soil was removed farther westward, where the upper layer contained fifty-three mason's chips, nine small pieces of pottery of indefinite period, and many fragments of animal bone, chiefly of pig. The silt in this section contained nothing of interest and when removed showed the bay to be a long one with a level floor rather rounded in the middle, and the barrier was seen to end at projections on both sides. On the west the bottom began to slope rapidly upwards until it suddenly formed a shallow level floor.

In the next section the upper layer was 18 in. deep in the middle except where it passed a much-used modern trackway entering Stonehenge, which was closed soon after the monument became national property. There it was shallow, as it had over it several inches of hard road metal, but below the hard material it was in a normal state and contained mason's chips. The upper layer of the section contained forty-three mason's chips, fourteen pieces of pottery, including one of the Beaker period, a nicely made flint arrow-head, broad and with long barbs, the only one met with throughout the excavations, also a flint implement, saw-shaped, with a chipped edge, and a rather large quartzite maul which was at 18 in. below ground-level.

In the next section the conditions were similar to those near the end of the last. The bottom of the ditch was unusually flat and very smooth, appearing as if it had been made so purposely, also it was very wide, being 13 ft. 6 in. across, and looked even wider, for the sides were only 2 ft. 7 in. high and descended almost perpendicularly. In the upper layer there were thirty-eight mason's chips and an iron arrow-head of uncertain date but probably Norman, and, as it was deeply barbed, possibly for sporting purposes. There were twenty-four pieces of pottery mostly of the Roman period, one of them with crenellated marking. The substance taking the place of silt was extremely hard, dirty, earthy chalk, but had no Stonehenge objects in it; there were, however, a few chipped flints under it at the bottom and a few fragments of ox jaw-bones.

The next section was almost precisely the same as the last, the only difference being that the width of the ditch decreased to 11 ft. 6 in. In the upper layer the following objects were found: sixty mason's chips, ten pieces of pottery mostly Romano-British and one of the Norman period, another iron arrow-head similar to the one found in the last section, and a nicely rounded quartzite hammer-stone. There were a few flint flakes on the bottom, but the silted layer over it contained nothing.

Only one more section was dug, and it was similar to the last two except that the width again decreased and was 9 ft. The upper layer contained twenty-six mason's chips, but no other objects. The silt became looser than it had previously been and there were a few flint flakes below it on the bottom. Beyond where we left off, the ditch appeared as if it might be continued in the same condition for a little distance farther, but probing in many places showed it to get deeper afterwards as if it resumed its normal condition.

The portion of the ditch excavated was unlike any that had been previously encountered. The frequently occurring bays with lateral projections were more emphasized on the south than in any other area, the change appearing to begin at 40 ft. on the east side of the new causeway and to be continued on the west in a more or less marked manner up to where the excavation of this season ended.

The bays or recesses had always been difficult to account for. At first I was inclined to believe they had been dwelling-places intercommunicating but with some artificial partition between them; this idea, however, no longer seems tenable, for had they been occupied there would have been a great deal of black refuse, animal bones, pottery, and marks of fires. Throughout the excavations hardly any instances of fires actually on the bottom occurred, and the only two of any consequence were those in the craters at the main entrance. From what was observed in the excavation last finished I am inclined to think that the bays were the result of the method of digging, which would also account for the roughly straight lines before alluded to. The digging might have been done by gangs of men consisting of twenty or more working together in a short defined area, and, after finishing their task at one place, moving on to another contiguous to it. They would thus progress round the circumference, while possibly other groups might be working elsewhere at the same time.

The spot marked for their task was probably of an oblong form, a short straight line in a circumference so great as that of the vallum being hardly appreciable. The successive short lengths conforming roughly to the circumferential line, when linked up, would give a circular appearance. The system of digging would necessarily be different from ours with modern tools, but their aim would be to get the chalk out in the best way they could to form the vallum. At first digging would not be difficult, as the chalk near the surface is loosely laminated and could be easily removed with horn picks. Lower down the stratification gradually disappears and the chalk becomes very solid, although advantage can still be

taken of some irregular lines of stratification. In addition to horn picks, tines of horn driven by wooden mallets would be useful, and the single tines met with would be valuable for getting out large flints by working round them, but in many cases they smashed the large flints with others. Some of the gang would pass out the spoil in baskets to the vallum whilst others were digging. The diggers probably concentrated on certain spots, making round holes, which, gradually increasing in size, became the craters or bays referred to above. Between the holes there would be a certain amount of undisturbed soil, forming barriers which it would be easier to dispose of than to excavate the whole area at once. It was not deemed necessary to remove these barriers entirely, so small portions were left adhering to the sides and on the bottom, forming the side projections and low traversing lines on the floor so often noticed. For some unknown reason three of the barriers were left, one of them, as before mentioned, being intact. Standing barriers seem to be peculiar to ditches of neolithic circles, as found by Mr. Keiller in his excavations at Windmill Hill, and frequently noticed by Mr. Crawford in the neolithic forts of Germany. Although pottery was discovered in both these instances, none was found in the Stonehenge ditch, and the early Beaker pottery only occurs in the silt above it. The existence of the three undisturbed barriers and the shallowness of the ditch on the south-west give the impression that the ditch was left unfinished. This is quite possible, but it is hard to account for the very shallow part of the ditch beyond the barriers, which was nearly 14 ft. wide, with a bottom intentionally made flat and smooth for a considerable distance. The only parallel I know to a ditch varying so much in depth is one round a large circular earthwork at Ratfyn, near Amesbury, found when making the railway. It stood over a small deep valley on the north and was 7 ft. deep in that quarter, but the actual width is unknown as it was not properly excavated. It might have been of later date than Stonehenge, but was last occupied in the latter part of the Early Iron Age. This was shown by a good deal of pottery of that period, one perfect piece being a small red bowl with a cover, a little resembling Samian ware in colour but not in form. The site was probably occupied also in the Bronze Age, as, about five years ago, a fine hammer-mace was found close to it on the south on land now built over, where there were three very low barrows in line with a large one still standing at the corner of the Amesbury road. This ditch, although very deep on the north, nearly died out on the south, but internally it had no projections on the sides, nor bays nor barriers. It had inhumation burials at short intervals along the bottom which were

continued nearly to the south. The graves were 2 ft. deep and boot-nails were found at the foot of every grave, showing that metal was used for foot protection even at that period. There were no objects of the Roman period noted. As this site has, I believe, never been recorded, perhaps I may be excused for giving these details.

Although there were no dwellings in the Stonehenge ditch it was evidently used for passage for some time after it was made, as is clear from the layer of dirty chalky mud everywhere present upon the bottom. As both in and over it quantities of flint chips were found, it may have been used as a shelter for sitting and making implements. The multitude of horn picks and pieces of antlers discovered was beyond any recorded elsewhere, so far as I know, and the great size of many of the horns indicates a race of red deer much bigger than met with at present. These and the remains of wild oxen and pig proclaim the people to have been expert hunters. It is singular that the remains of roe deer were very rare, but as the bone remains have not been examined, we do not know what other animals may be represented.

Only about half the soil was returned into the ditch, or sufficient to allow a depth of 2 ft. above the bottom. This was done to make the appearance of the ditch more distinct, for at some places it had become nearly invisible. The operation was slow, as the soil had to be rammed to prevent subsidence and to support the sides at a steep angle. The sides had also to be rammed, otherwise when turfed over all would have slid downwards. After the work of last season, every care was taken to preserve the appearance of the abnormal inequalities, and I think everything possible was done to make the unusual features intelligible.

Having completed the ditch excavation, we returned once more to the small vacant area within the Stonehenge circle which had been given up at an early stage last year (figs. 3 and 4). This time we began on the east side and worked towards the place previously opened on the west so as to include it. The object of our investigation was chiefly to find if the curved line of the inner horseshoe was continued beyond the stones now standing, as sounding had given indications of deep places existing where other stones might have stood. Broad trenches were cut from as near the inner circle line as would be safe without interfering with the stability of the stones of which it was composed, the trenches being continued inwards towards the fallen fragments of the lintel of the fifth trilithon.

The first section was begun 4 ft. from stone no. 31 of the second circle and continued 18 ft. towards the south, being 6 ft. wide.

The upper layer was 15 in. deep from the surface and was composed of dirty earthy matter containing quantities of sharp angular flints similar to those met with around the big stones and at the approach to the monument from the north. It contained debris of all ages, particularly of the time of the setting up of the foreign stones, their chips being very plentiful. The objects which occurred in the layer were: 34 pieces of quartzite, 51 sarsen, 102 rhyolite, 104 diabase, 51 volcanic ash, and 8 micaceous sandstone; 2 quartzite

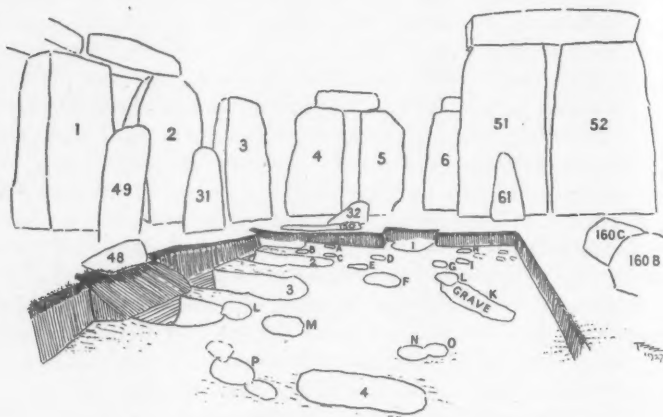


FIG. 3. Excavation inside the stones looking south-east.

1-4. Holes which may have held further stones of the inner blue stones.

1. 49 in. and 27 in. diam.: 20 in. deep from chalk floor to bottom.
2. 37 in. and 20 in. diam.: 27 in. deep from chalk floor to bottom.
3. 51 in. and 20 in. diam.: 15 in. and 28 in. deep from chalk floor to bottom.
4. 38 in. and 21 in. diam.: 14 in. deep from chalk floor to bottom.

A-P. Post-holes.

- | | |
|--|-------------------------------|
| A. 14 in. diam., 12 in. deep. | B. 21 in. diam., 18 in. deep. |
| C. 12 " " 9 " " | D. 12 " " 14 " " |
| E. 14 " " 23 " " | F. Shallow. |
| G. 13 " " 8 " " | H. 15 in. diam., 13 in. deep. |
| I. 14 " " 15 " " | I. 11 " " 13 " " |
| K. 84 in. long, 23 in. wide, 8 in. deep. | L. 13 " " 13 " " |
| M. 19 in. diam., 18 in. deep. | N. 12 " " 11 " " |
| O. 14 " " 11 " " | P. 14 " " 18 " " |

pebbles, 5 flint hammer-stones, and 1 of quartzite; 3 small worked flints, 1 pointed piece of bone, and 7 iron objects including nails. Of pottery there were 6 small pieces of the Beaker period, 18 Romano-British with a few of earlier date, 15 Norman, 6 medieval, and a great many insignificant modern pieces and small objects. The chalk level came directly under the upper layer, and as some

of it was seen to have been disturbed, it was dug into and revealed a cavity filled with yellow chalk rubble. On the west it had a perpendicular side of solid chalk 18 in. high and was about $3\frac{1}{2}$ ft. deep from the surface. It was evidently an incline for introducing stone no. 31 to its position and began on the chalk level 9 ft. 5 in. from the base of that stone, sloping downwards towards it. On the east of the incline the side was sloped from the bottom upwards in a curve rising to the same height as the opposite side. Beyond this to the east and all around it the surface had been much

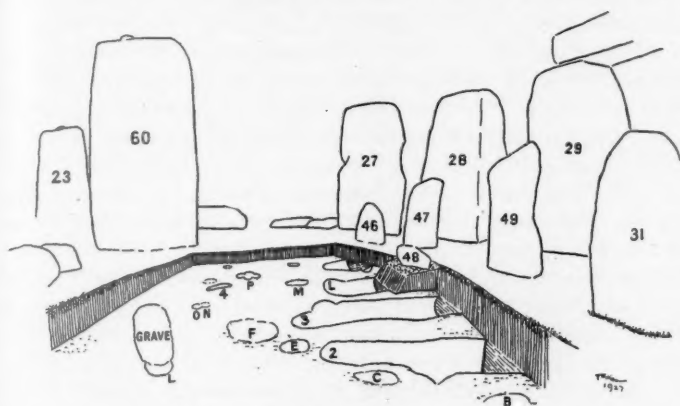


FIG. 4. Excavations inside the stones looking north-west.

References as fig. 3.

Distance from base of stone no. 31 to outside edge of hole 2,	9 ft. 5 in.
" " " 49 "	" " 3, 9 ft. 3 in.
" " " 48 "	" " incline, 4 ft. 6 in.
" " " 47 "	" " " 5 ft. 3 in.

disturbed and was pitted with irregular cavities of all sizes holding earthy chalk. There was a large deep hole contiguous to the incline on the south with the appearance of having been made to hold a stone about the size of those of the horseshoe and descending 4 ft. from the surface. Close to it on the south there was a well-defined post-hole, and another, almost as near, on the east, both of them well-cut holes resembling those met with on the outside on previous occasions.

The second section was somewhat similar to the first and came in front of stone 49. The upper layer was 19 in. deep from the surface and contained 287 mason's chips and a piece of oolite; three small pieces of Beaker pottery, 2 Romano-British, 62 Norman and medieval, 4 nails and iron objects, 1 worked flint, 3 hammer-

stones, and much modern rubbish with 2 broken Georgian tobacco pipes.

Another incline was found, beginning at 9 ft. 5 in. from the foot of stone 49, and was somewhat similar to the last except that it was deeper and the east side was a perpendicular cut of 29 in. in the solid chalk, the west one being an upward curve to the same height, thus reversing the conditions of the previous one and leaving a block of solid chalk 4 ft. wide between them with perpendicular sides, but there was no apparent reason for the block. The depth of the inclines is taken from the edge of our excavation nearest the stones and would be perhaps a little deeper farther on. This incline was deeper than the last, being 4 ft. from the surface. There was a large hole on the west of the incline, as in the last, which could have held an upright stone. There was also a post-hole a short distance from the south-east of the point where the incline began.

A section of the same dimensions was opened to the west of the others. The upper layer was 15 in. deep from the surface and contained 13 pieces of quartzite, 2 of which were broken hammers, 8 pieces of oolite and 1 of greensand, 163 mason's chips, 2 worked flints, and 1 piece of Romano-British pottery. This section was in front of the fallen stone no. 48, and there was an incline towards it of much the same appearance but smaller than the other two. It began on the solid chalk 4 ft. 6 in. from the approximate position of the stone and was 27 in. deep from the surface. There was a rather large hole on the south-west corner of it, not so big as those in the other inclines, but large enough to hold a small stone.

At the south part of this section there were signs of comparatively recent disturbance immediately south of the incline, and some human bones occurred in it. To follow them up, soil was removed at the end of the first section and over a wide space from east to west near the broken pieces of the lintel of the fifth trilithon. About 5 ft. from the second fragment a quantity of human bones was come upon in a disordered mass, evidently thrown there carelessly. To get an idea of the time when they were placed there, care was taken to note the position of objects with and around them. Mixed with the bones there were three pieces of medieval and one piece of Bronze Age pottery. At the sides, on a level with the bones, there was an illegible Roman coin, one piece of Bronze Age pottery, and two links of an iron chain. Under the bones were two pieces of tobacco pipe of Georgian period, one piece of bottle glass, one piece of medieval pottery, a small coin of Tetricus, and an ordinary pin, but with a round head, showing it to be either Georgian or very early Victorian,

also a silver-plated brass chape of a knife or dagger, a plated saddle billet, a horseshoe nail, and a boot-protector, both of the Roman period, and 26 pieces of Romano-British and earlier period pottery. The soil was rather deep below the bones, and further digging revealed a grave from which the bones had evidently been rifled, and this was proved to be the case by finding a few fragments left in the grave, notably an arm-bone. From the fact that pieces of tobacco pipe and glass were found below the mass it may be concluded that the grave was disturbed by somebody about the Georgian period. The grave, excavated in solid chalk, was a shallow one reaching $2\frac{1}{2}$ ft. from the surface and closely resembled the grave found in 1924 between two post-holes outside the circle on the east. The entire length of the cavity was 10 ft., and the lower part showed a deeper cutting 8 ft. long, which was probably the original length of the grave, but the solid chalk around it had evidently been disturbed by the excavator. The direction of the grave was from north-west to south-east, and the position of the arm-bone showed the head to have been at the north-west end of it. There was a post-hole at the south-east of the cavity, not included in the lower part of the grave, but in the extension presumably made by the excavator. There was a large cavity or depression north of the grave, which had two post-holes observable in the bottom portion of it, but it could not be ascertained when the disturbance took place: it may have been at the same time as the grave.

Section 5 was made bigger than the others. It came opposite stones nos. 46 and 47 and was united with the portion opened the previous year. The upper layer was 15 in. deep and contained 370 mason's chips, 3 pieces of oolite, 1 flint hammer, an axe-shaped piece of rhyolite, 1 piece of Beaker pottery, 14 pieces of Romano-British pottery with others of earlier date, 18 pieces of medieval pottery, 1 nail, a fragment of a knife-blade, and 10 fragments of animal bone of indefinite age.

There was an incline in this section very similar to the one in the last, beginning on the solid chalk at 5 ft. 3 in. from the inner circle line. It was 27 in. deep, but was not immediately opposite stone no. 47 and might have served for the introduction of both 47 and 48. There was a bowl-shaped hole to the south of the incline which seemed to have been enlarged from a post-hole and held two large lumps of clean white sarsen, four pieces of quartzite, and a quartzite hammer.

A narrow cut was taken along the east side of the entire excavation, partly to expose a large hole appearing on the east side of the first section, which had been left for later investigation.

The upper layer contained ninety-seven mason's chips but no other objects. The hole at the side proved to be a large one of long oval shape. It was $3\frac{1}{2}$ ft. long and 3 ft. wide at the top, decreasing to 3 ft. long and 9 in. wide at the bottom and descending about $4\frac{1}{2}$ ft. It evidently held a large stone of flat shape and the position of it showed it to have faced inward on a curve indicated by the last standing stone of the horseshoe. At the north end of the cut the incline to the missing stone next to no. 31 could be seen, but both it and the neighbourhood had been disturbed. As there were no other interesting features the excavation now ended.

When digging the sections, the whole of the excavated area had gradually been stripped to the solid chalk, and the surface was seen to be pitted with holes of various sorts and sizes. Some of these holes were evidently of late date, but only those that could undoubtedly be called post-holes of early date were taken into consideration. The number increased towards the south of the first two sections, where there was a group of eight, but altogether twenty-four could be seen dotted about without any order or reference to one another. Their general appearance was similar to all the others that had been found before. They were related to an irregular line beginning near the south barrow (so called), extending to where we were and presumably passing the second trilithon, but now much farther to the north-west. Their extent can only be revealed by future excavation, but perhaps they do not pass beyond the circle. The period to which they belonged might have been the same as that of the Aubrey holes, which are now thought to have held the posts of a wooden circle or cromlech. I would hazard the suggestion that the post-holes on the south might have something to do with a wooden passage grave, for the double row of holes beginning near the south barrow may imply some sort of long roofed construction. Many of the shallow holes would only support uprights held in place by a roof, or imposts extending from their tops to others held firmly in deep holes (as noted in the 1924 Report). The long covered portion did not extend very far, and beyond it the post-holes took no form, so there is very little to warrant this theory, but it is perhaps worth a little consideration and might lead to some better suggestion.

Regarding the extension of the ends of the horseshoe, there are certainly three stones on the north-east which show a definite prolongation of the figure, namely, the large one in the last section excavated, one in the first section, and one in the second, as before mentioned. There is a long oval hole in the solid chalk, about $3\frac{1}{2}$ ft. wide, that would take a rather wide stone. It is about 7 ft.

from the incline to stones nos. 46 and 47. This hole is in the same curve as a large hole about 5 ft. from the north-east corner of the standing stone of the fifth trilithon, which was too near that stone to allow of it being excavated with safety. From these indications I believe that the stones of the horseshoe were continued in a curve forming an ovoid figure and not one of horseshoe shape. After passing the trilithons the figure was prolonged with stones standing at least twice as wide apart as those immediately in front of them, on account of the scarcity of stone, and they were probably the last erected.

Review of the Features of the Excavation

About one-half of the Stonehenge area has now been investigated, and as the excavations are suspended for the present it may be well to review some of the features and facts observed during the course of them.

It is now evident that the site is older than the monument standing upon it. The ditch gives proof of this, for it was silted up when the monument was made, the chips of the stones forming the latter occurring only above the silt and never in it. The builders of the monument apparently did not require the protection of a ditch, so no attempt was made to reform it, nor the vallum, and they appear to have been left in nearly the same state as at present, the chips being found on the chalk of the vallum close below the turf covering it.

No pottery was found in the craters of the big stones that were adjusted, except a little that had gravitated with humus down the sides of the holes with objects of quite late date. No pottery was found on the floor of the ditch and none in the actual silt, except in places afterwards excavated in it and where pottery of a later period occurred. Pottery of all ages since the monument was erected occurred, mixed together plentifully, immediately above the silt and at a sharp dividing line. The earliest of this pottery was that of the Beaker period. Although some of this was found mixed with other pottery at a higher level, there were instances of it being embedded in the top of the silt, sometimes several small pieces of a shard together. As the fragments were definitely below the level of the others, it may be concluded that they came there first and belonged to a people who arrived when the silting was nearly, or quite, completed. The Beaker pottery is, I believe, attributed to the close of the Neolithic period, so late indeed that it might pass into the early part of the Bronze Age. In that event this pottery would place

the building of the monument about the overlap of the two ages, which I think is the date that has been generally attributed to it: so the inception of the monument would date from the latest part of the Neolithic period.

The rather elevated place on the south which had previously been called a barrow proved not to be one. This slight elevation is due to a natural rise of the chalk and perhaps to a wearing away of the chalk surface on the east of it. It is surrounded by a small shallow trench, very irregular in shape and certainly not round. This trench is shown to have been constructed at a later date than the vallum, as it cuts the vallum on the south, forming nearly a straight line. It was of later construction than the Aubrey holes, as is shown by three of them occurring in it: one of these, on the west, had been cut through when making the trench, leaving portions of the hole still observable on the sides.

Probably of the age of the inception of the monument, and in the centre of it, there was a large hole intended for a stone, with an incline for introducing it, like those seen in the stone-holes of the monument. This stone would be a fellow one to that reclining on the rampart to the east of it, forming two of the four stations from which lines intersect at the centre of Stonehenge. Close to the large hole is an Aubrey hole, and both showed signs of a late disturbance.

The Hele stone stands within a circular trench about 5 ft. deep. It was probably one of two rough stones standing in rather shallow craters to the south and south-west of its present site, and seems to have been moved from its first position along a wide groove which passed through the circular trench in the direction of its present site. The Hele stone is a rough piece, and no doubt the other was the same, for it had been taken out and trimmed on the spot, as is shown by innumerable chips around the spot where it stood. This seems to place the date of the present position of the Hele stone beside that of the monument, but it should be noted that it is not in the axial line of it but slightly to the east. The circular trench was no doubt of earlier construction.

There are three large post-holes and vestiges of a fourth extending from the edge of the circular trench towards the avenue ditch. That they were there before the avenue was made is evident from the fact that soil from the avenue trench covers the hole on the west.

The Aubrey holes may be taken to have been of earlier construction than the monument and to have held wooden uprights. If the shallow line of chalk occurring a little below the top of the

ditch silt was discarded from them, they would have been made when the ditch was nearly silted up and would antedate the monument by a short period.

The innumerable and often very symmetrically made post-holes found everywhere from the north to south and in the middle, I think can be regarded as the earliest structures on the site, or they may possibly be coeval with the Aubrey holes. That they were early is proved by their being found cut into by the work of the monument and at other times, and they never contained objects of the date of the monument. Their use is not known, for they show no regular positions beyond a vague line here and there. Those standing in the causeway entrance show a little more regularity of straight lines, and might possibly have carried a wooden gate-house there.

The Y and Z holes are certainly of the same date as the monument and came into the original plan, as can be seen by their positions, which are radially opposite the standing stones of the outer circle. Perhaps it was intended they should hold the foreign stones, but something made the builders alter the plan and place these inside the monument. They are different in shape from any hole that was found and were skilfully made wedge-shaped with sharp sides and corners. At first I believed that they had held stones, afterwards extracted, but the sharpness of their sides and angles is so well preserved that I no longer think so. There is no sign of packing, and they could not have been left open very long or they would have suffered from weather. They did not hold wooden columns; their shape precludes the idea; besides, there is no core showing decay of wood. They contained chips of foreign stone down to the bottom, showing they were made after those stones were trimmed, and they seem to have been filled in with surface-matter and debris. Hole 7 was found but partly dug and Z 8 was missing entirely, but with these exceptions their positions were regular up to the point where the excavation ceased, and sounding shows that beyond this their positions occur in proper order. Z 4 had been dug into at a later period to about two-thirds of its depth. Remains of a fire and hearth were found at that depth, and the pottery associated with it pointed to a disturbance in the Early Iron Age.

The foreign stone lintel will probably always be a mystery. It has been considered that the foreign stones might have belonged to an existing circle in the neighbourhood of the quarry, and that they were taken up and transported to Stonehenge. If that was the case I should like to hazard the suggestion that it belonged to some part of the original circle and came with the

stones, and, being no longer required for its former purpose, was erected in one of the inner circles.

Outside the ditch many hollow places were detected by sounding. Several were opened but gave no important result. They occurred at indefinite intervals and distances from the ditch and were shapeless and of all depths to 3 ft. I think they may be discarded, and I merely mention them to show that they have been noted, and it is likely that they were places where thorn trees or junipers had grown.

Farther to the east and nearer the large barrow on the side of the main road there are a great many excavated depressions, some of them of considerable extent, but all of them rather shallow, which I believe to have been places from whence soil was taken to make the barrow. Out of six or eight that I opened one only contained the bones of a horse and the rest nothing. The ditch of that barrow I ascertained to be $3\frac{1}{2}$ ft. deep by making a small opening 4 ft. wide. It contained fragments of Bronze Age pottery and several Stonehenge chips of all sorts. It would be interesting to know whether any of the soil had been taken from the Stonehenge site to help to make the barrow.

The excavations did not show that Stonehenge was a sepulchral site, but I quite believe it was erected to be reminiscent of something of that nature which had stood there previously. It was no doubt first and foremost a temple and secondly a place of assembly where priests and military nobles dispensed justice and promulgated laws. It would be a well-known landmark, a centre for trade, and a nodal point. Two of the present high roads to the west bifurcate there and may have been well-used tracks at that time. A vague tradition of a fair held there may be a survival from a time when trade was carried on there, but so very little is known for certain about the place that what I say is mainly conjecture, and it is to be hoped that future excavators will be able to throw more light upon it than I have done.

A Saxon Cemetery at Luton, Beds.

By WILLIAM AUSTIN, F.S.A.

With notes by THOMAS W. BAGSHAWE, F.S.A., and Professor
F. G. PARSONS, F.R.C.S., F.S.A.

It is well known that Luton in Bedfordshire is a mine of prehistoric and historic remains. Our late Fellows Major Cooper-Cooper, of Toddington Manor, and Sir John Evans recorded finds of prehistoric graves, pottery, palaeolithic and neolithic flint implements in Luton and the surrounding hamlets of Leagrave, Biscot, and Stopsley. The late Mr. Worthington G. Smith discovered at Round Green in Luton a palaeolithic workshop similar to the one he found at Caddington, and his account of the latter will be found in *Man the Primeval Savage*, that of Round Green in *Archaeologia*, lxvii. Sir John Evans found in and around Luton many British and Roman coins, also specimens of Roman pottery. Mr. Worthington Smith found both British and Roman coins in considerable numbers at Limbury. Specimens of Roman and Roman British pottery have been found in all parts of Luton. I dug up a large Roman pot at Turner's Knoll, Luton, which Mr. Reginald Smith thinks was used for storing grain. It has been restored by Mr. Axtell, and measures 16 in. in height and 15 in. in diameter. I found many Roman tiles in a field at Luton called 'Lower Thirty Acres', and other Roman remains have been found in Waller Street and in various parts of the town.

In the Saxon Chronicle there are several references to Luton. For example, in 571 it is described as a Royal town taken by the West Saxons. In 879 it was on the line of partition made between King Alfred and Guthrum. In 917 it was attacked by the Danes from their stronghold at Ravensbury Castle, when the Danes were driven back by the men of Luton. In 931 King Athelstan assembled at Luton the most numerous attended Witan recorded in Saxon history: the king with two Welsh princes, the two archbishops, all the seventeen bishops, fifteen ealdormen, and fifty-nine thegns were present.

It is my purpose in this paper to invite attention to some important finds of Saxon remains at Luton found within the last few years. In 1908, a few yards north of Icknield Way and close to the British encampment called Wallud's Bank, the graves of two women were found. They are described in the British Museum *Anglo-Saxon Guide* as being unusual, the bodies being

contracted and not laid at full length. But for the fact that articles found in the graves were certainly early Saxon, the graves might have been described as those of early Britons. With one body, having the head at the west end of the grave, were two disc brooches with iron pins, and a gilt disc with heart-shaped openings, which had originally formed an ornament on a bucket. With the same body was found a pin, with two spangles, which had left its impress on the left clavicle of the skeleton. The second body had a pair of disc brooches on the shoulders. From the same place, but probably belonging to a third burial, was a bronze stylus for writing on wax tablets, and part of an ivory armlet, measuring $4\frac{3}{8}$ in. across outside and one inch less within. The fact that these bodies were females may be taken as proof that there was a Saxon settlement in or close to Wallud's Bank.

About one and a half miles from Wallud's Bank, on the high ground by Biscot Windmill, is the site of an ancient footway called Peddar's Way. In 1923 a new road was made along the site of the Peddar's Way, from Bedford Road to the Windmill at Biscot. In making the road, workmen came upon several early burials a few yards north-east of the windmill. The first find included the skeletons of four full-grown bodies about 12 in. below the level and lying on the solid chalk. By the side of one of the bodies were an iron spear-head and the blade of a small iron knife. The heads of two of the bodies were towards the east, the others towards the west. I showed the spear-head and knife to our Fellow Mr. Reginald Smith, who informed me they were of Saxon manufacture of the sixth century.

The second find was in the month of August 1925. Messrs. G. Powdrill and Sons, of Luton, laid out a new road to be called Argyle Avenue, leading to Alexandra Avenue and thence into the Peddar's Way. Argyle Avenue is within the borough of Luton on the boundary of the hamlet of Biscot. In cutting a trench for a sewer along the avenue, workmen came upon several skeletons and some pottery. I visited the spot and secured a fine cinerary urn (pl. xxxvii, fig. 1) and three saucer brooches. These were identified as early sixth-century Saxon work.

Mr. Arthur Powdrill gave permission to make further investigation of the site, and, being myself too busy to undertake personal superintendence of the necessary excavations, I interested my friend Mr. Thomas W. Bagshawe, of Dunstable, in the matter. He is an enthusiastic young antiquary, who acquired an archaeological bent from long association with the late Mr. Worthington Smith.

A Saxon settlement at Luton early in the sixth century raises some doubts as to the correctness of the Saxon Chronicle of A.D.



Bronze saucer-brooches (1)



FIG. 1. Bronze saucer-brooches ($\frac{1}{2}$)

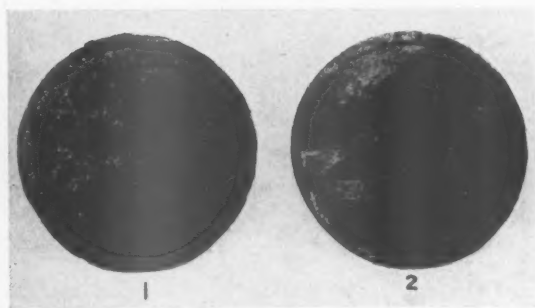


FIG. 2. Bronze disc-brooches ($\frac{1}{2}$)

571, where it is recorded that the West Saxons fought the Britons at Bedford, and took possession of the four Royal towns of Luton, Aylesbury, Benson, and Eynsham. It is well known that there must have been early sixth-century settlements of the West Saxons at Kempston in north Bedfordshire, and that fact, taken in conjunction with the newly discovered evidence of a similar settlement at Luton some fifty or more years before the West Saxons fought with the Britons at Bedford, involves a contradiction which has so far not been satisfactorily explained by modern students of our Saxon history.

NOTES ON THE EXCAVATION

By T. W. BAGSHAWE

During August 1925, workmen engaged in making a road called Argyle Avenue at the north-western end of the borough of Luton, whilst digging a sewer trench, cut through a number of graves. This find was not reported till later, but fortunately a few of the objects which were kept clearly indicated the Saxon date of the find. The position of the cemetery can be seen on Ordnance Map 1/1500 Beds. XXXIII. 1, the cemetery lying from about 550 ft. north-west of St. Andrew's Mission Church and about 450 ft. from the municipal borough boundary, which is represented by an ancient track called Peddar's Way, near Biscot Windmill.

The length of the cemetery as traced was about 185 ft., and the breadth about 70 ft. This may not represent the full area of the cemetery, as in the south-eastern portion little work could be done owing to the erection of houses. A trial trench was dug to the east, as is shown in the plan. Trial-holes to the west and south-west did not bear fruit. As the ground sloped away somewhat in this direction, it is probable that the graves were kept on the higher ground. As will be seen from the plan, the greater number of graves was found where a deposit of drift up to 3 ft. thick covered the chalk beneath. The graves lay approximately in a north-west-south-east direction towards Biscot Windmill, where Saxon relics had previously been found. These may represent a continuation of the cemetery. A sewer trench dug along Alexandra Avenue was carefully examined daily, but no traces of burials could be found. This tends to confirm the narrowness of the burial ground.

Excavation was not conducted as scientifically as could have been wished. The site lay in the middle of a new roadway and building site, and, although the greatest consideration and help were given by the owner, Mr. Arthur Powdrill, it was not possible to take the time over the excavations that the find warranted. In

some cases the owners of plots of land were unwilling to have their ground disturbed. Work had largely to be regulated by the progress of the road-making. The workmen found many of the graves, and although two of the men came to show more than average intelligence, and could be relied on to preserve the skeleton as well as the other contents, other workmen could not. Several graves were, however, excavated as carefully as time and conditions would permit. The bad weather and the stickiness of the soil made the extraction of the sodden skeletons very difficult.

No external evidences of the presence of the graves existed, and for the first days we cleared out the graves laid bare during the excavation of the sewer trench, before it was again filled up. Naturally the workmen had removed in some cases parts of the skeletons. Occasionally pot-holes in the chalk were found, which closely resembled the graves. The actual burials could be seen in the cases of Graves 1 to 6 by a pocket of disturbed material through the subsoil on to the chalk, or, in the case of the remainder, of defined pockets in the covering of drift, in some instances projecting a very little way into the chalk below. The general tendency in digging the graves was merely to rest the body on the chalk, or to remove as little as possible of it.

The depths at which the skeletons were found varied from 1 ft. 6 in. to 3 ft. 6 in. below ground level. In a few cases all that remained of the skeletons was a few fragmentary bones, whilst in others the greater part of the skeleton was preserved. In Grave 22, although 4 ft. of the grave was excavated (the rest could not be finished owing to a curb) all that remained of the skeleton was a few small pieces of the skull.

Orientation, where it could be observed, was mainly feet to east, but in a plural interment, Grave 6, remains of six skeletons were found very close together and very difficult to keep separate. They appeared to be lying in no definite direction, in one case feet to south and in two others feet to east.

Summary of the Objects found

Iron objects—Umbos. Eight umbos were found of the ordinary 'mammiiform' type. Three of these were rather fragmentary. Two are illustrated in pl. xxxvi, fig. 2. The handle-bars represent four forms:—

- (a) Scroll type (fig. 1, no. 1).
- (b) Plain rectangular (fig. 1, no. 2).
- (c) Rectangular, curved edge (fig. 1, no. 3).
- (d) Concave on long sides (fig. 1, no. 4).



FIG. 1. Bronze saucer-brooches ($\frac{1}{2}$)

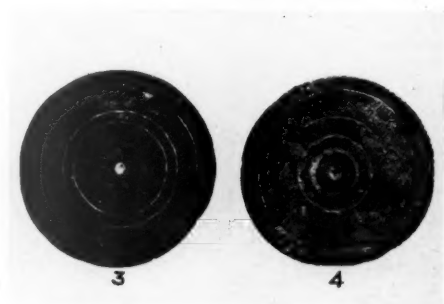


FIG. 2. Bronze disc-brooches ($\frac{1}{2}$)



Bronze square headed brooch ($\frac{1}{2}$)

One of the handle-bars conformed to type *a*, one to type *b*, one to type *c*, and two to type *d*. In the remainder the handle-bars were not preserved by the men.

The umbos themselves varied in their base or largest diameters from $6\frac{3}{8}$ in. to $7\frac{3}{16}$ in.

Swords. Only one of these was found, this being in a perfect

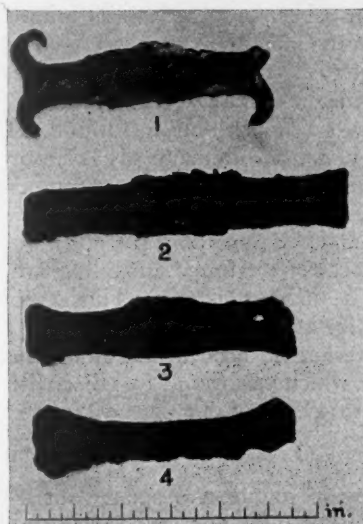


FIG. 1. Shield handles.

state (pl. xxxvi, fig. 1) and showing traces of the wooden scabbard. The length is $33\frac{1}{4}$ in.

Spears. Sixteen spears were found, all of which are shown in pls. xxxiv and xxxv. They were of various sizes and all except two of the split-socket type. The two examples of the closed-socket type are shown in pl. xxxiv, fig. 2, no. 6, and fig. 1, no. 3.

Knives. Twenty knives were found varying in length from $3\frac{1}{2}$ to 5 in. (pl. xxxv).

Miscellaneous. Amongst odd objects found during the excavations was a buckle shown in pl. xxxv, no. 14, and another better example in no. 18, which owes its good preservation to the fact of its being plated with tin. The object is scarcely corroded. Three iron rings shown in pl. xxxv, no. 20, whose use is not clear, were found together. They may have been horse-

trappings. A single purse-mount was found and is illustrated in pl. xxxv, no. 15. An example of what, according to Mr. Reginald Smith, is a reed, lay or batten, for striking home the weft threads on a loom, was found during excavations for a gas main. The blade measures $9\frac{1}{2}$ in. in length, and the larger tang 2 in. in length. The smaller tang has evidently been broken off.¹

Bronze Objects—Brooches. Brooches occurred in very fair numbers. Eleven saucer-brooches were found, including four pairs (pls. xxvi, xxvii, fig. 1, and xxviii, fig. 1, nos. 2, 3, and 4). The pair shown in pl. xxvii, fig. 1, nos. 1 and 2, have a garnet setting in the centre, and nos. 3 and 4 a glass setting in the centre.

One perfect applied brooch only was found. This is illustrated in pl. xxviii, fig. 1, no. 1. Remains also of four pairs of applied brooches were found, all being in rather a fragmentary state. The largest pair of these measured $2\frac{1}{2}$ in. in diameter, two other pairs measured $1\frac{3}{8}$ in., and the remaining pair $1\frac{1}{2}$ in.

Seven disc brooches were found, including two pairs (pls. xxvii, fig. 2, xxviii, fig. 2, and text-fig. 2). Those shown in pl. xxviii, fig. 2, have holes for an inlay in each.

Amongst square-headed brooches, the most noteworthy is that shown in pl. xxix, which was found together with the two saucer-brooches shown in pl. xxvii, fig. 1, nos. 3 and 4, and a spear (pl. xxxiv, fig. 2, no. 7). A portion of the back pin of this brooch was also found.

In Grave 28 were found two small square-headed brooches (pl. xxx, nos. 1 and 2). Grave 22 contained a single specimen only (pl. xxx, no. 3). The remaining brooch (pl. xxx, no. 4) was unfortunately damaged by a workman in an attempt to polish it up.

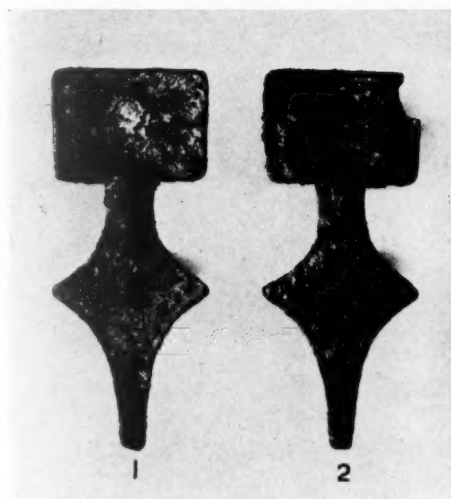
A brooch of special interest is shown in pl. xxxii, nos. 1, 2, and 3, the front, side view, and pin being illustrated. This is very similar to one illustrated in the *British Museum Guide*, p. 72, fig. 80, which was found at Kempston in Bedfordshire, and stated to be amongst the earliest Anglo-Saxon relics in the country.

A single example of a bird-brooch is shown in pl. xxxii, no. 6, and an equal-armed brooch in front and side views in nos. 4 and 5. This is interesting in view of the discovery of another equal-armed brooch of later date near by, in the bed of a spring near Tottenham.²

Toilet Sets. Two complete toilet sets were found, each consisting of a *cure-oreille* and two stiletto-like objects. These are shown in pl. xxxi. A third damaged set consisted of a *cure-oreille*

¹ Cf. *British Museum Anglo-Saxon Guide*, 1923, p. 56, fig. 61.

² *Vide Dunstable Museum Report*, 1925-6, p. 7.

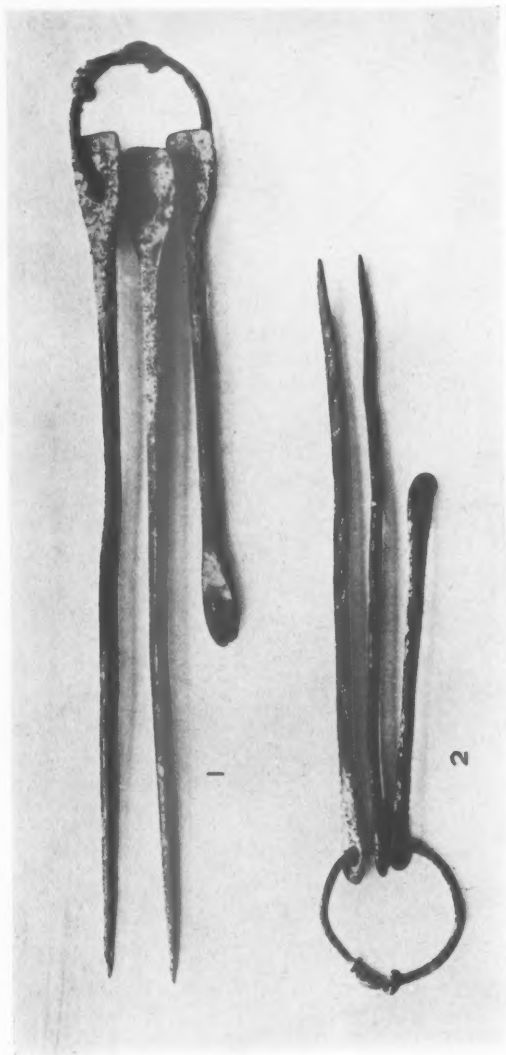


a



b

Smaller bronze brooches ($\frac{1}{2}$)



Bronze toilet sets (1)

and a stiletto-like object together with the ring. A solitary stiletto-like object was also found.

Belt Fastenings. The female skeleton of Grave 27 yielded some belt fastenings with fragment of leather still attached, which are

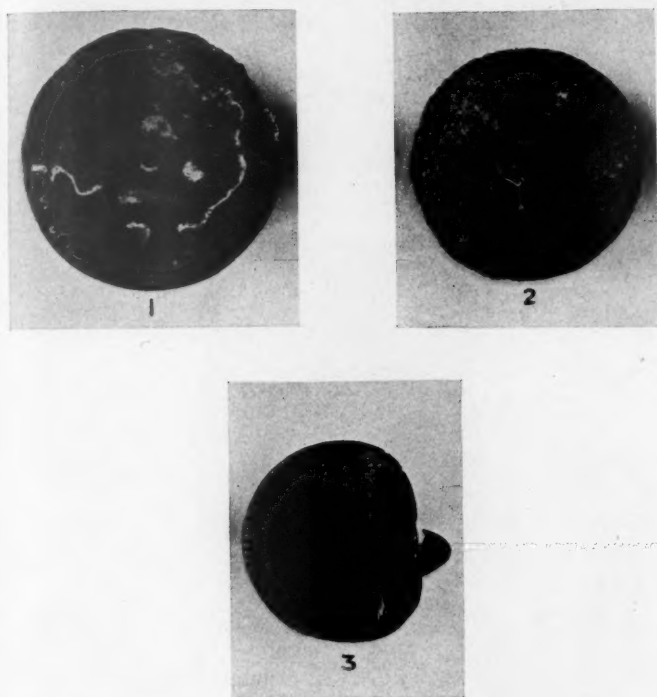


FIG. 2. Bronze disc-brooches ($\frac{1}{4}$).

shown in pl. xxxii, nos. 10-13. There are traces of tin plating on the bronze.

Sundry. An object of doubtful use is shown in pl. xxxii, no. 8. It was found together with two disc-brooches on a female skeleton (Grave 8).

Buckets. A solitary bucket was found in Grave 32 with parts of the skeleton of a male. The rest of the grave-furniture comprised a spear and a knife. Portions of the yew¹ staves were

¹ Kindly identified by Dr. A. B. Rendle, F.R.S., Keeper of Botany, Natural History Museum.

fortunately preserved by the workmen, and from these it was possible to reconstruct the bucket in its original shape, the bronze bands being mounted on a new foundation. The bucket, which is shown in fig. 3, stands 4 in. high, is 4 in. in diameter at the base, and $3\frac{1}{2}$ in. in diameter at the top.

Gold Objects. The only object made of this material was a fine



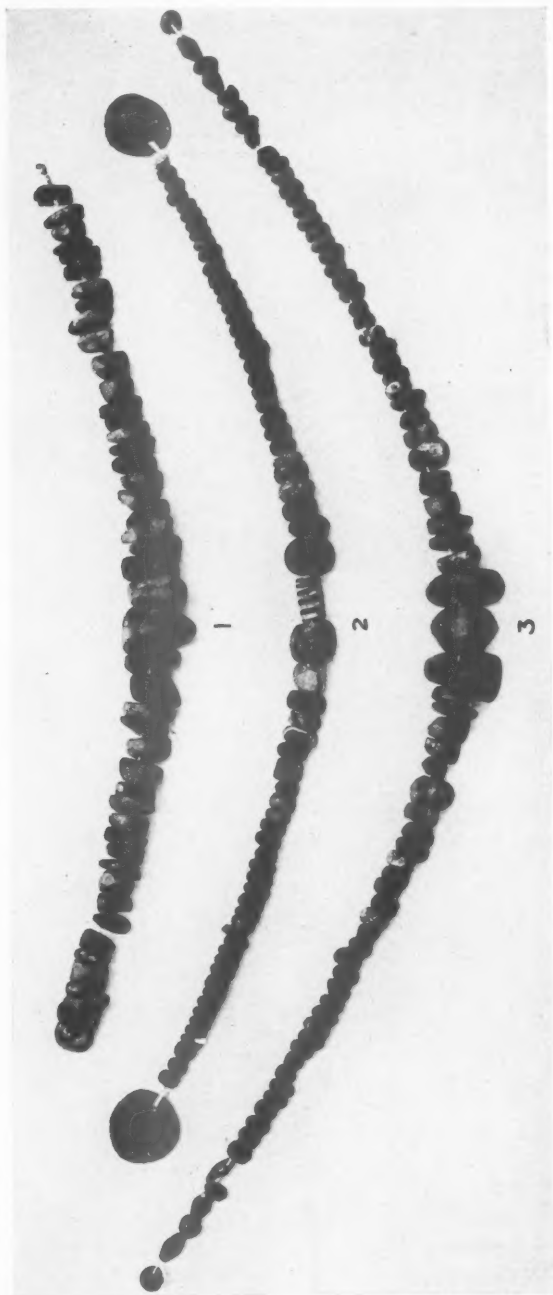
FIG. 3. Bronze mounted bucket (3).

specimen of a spiral ring with slight ornamentation in the form of punch marks. This was found on the left hand of the female skeleton of Grave 27, and is shown in pl. xxxii, no. 9.

Necklaces. In Grave 22 there was found, with the fragments of a skull, a festoon of 44 glass and 22 paste beads with a Roman coin at each end (pl. xxxiii, no. 2). One of these coins is of Carausius (A.D. 287-93), 2 Æ. Uncertain mint. Webb 531. The second is of Constantine I (A.D. 306-37), 3 Æ. Mint Trier. Cohen 525. Coin date A.D. 313-17. The coins were, as far as could be seen, in the positions given in the illustration. Connected also with this necklace was a very thin bronze disc $1\frac{1}{4}$ in. in diameter with two small holes at the top. A second necklace entirely composed of wedge-shaped amber beads, forty-seven in all, was found in Grave 25. This is shown in pl. xxxiii, no. 1. The third and largest necklace (pl. xxxiii, no. 3) consisted of 18 amber,



Bronze brooches, buckles, etc. (1)



Glass and amber beads ($\frac{1}{2}$)

38 glass, 18 paste, and 1 rock-crystal beads. This, we were informed by the workmen who found the burial, occurred as a festoon. It was part of the furniture of Grave 27. Two very small bronze caps were also found and may have been connected with the necklace. In this same group, which, unfortunately, we were too late to watch, there occurred also two lots of beads (one containing 52 and the other 56 glass beads). These, according to the workmen, were armlets.

The glass beads were generally small, of amethyst colour, in some cases two or three being joined together. The amber beads were for the greater part wedge-shaped and a beautiful dark reddish colour when seen in water. Some of the amber beads were very small and melon-shaped. One can be seen next to the extreme bead at each end of the necklace, pl. xxxiii, no. 3. The paste beads were of conventional designs ornamented with circular or winding lines.

Miscellaneous Objects. A button-shaped object which appears to be a centre bead or pendant of bone is shown in pl. xxxii, no. 7. Two Roman coins were found separately. One was pierced and evidently originally attached to a necklace or used as a pendant. This is of uncertain attribution, being particularly corroded. In the opinion of the late Mr. A. G. K. Hayter, who examined all the Roman coins, it is probably a 2 Æ (? dupondius) of Vespasian (A. D. 69-79). The second is a 3 Æ (ovoid flange) of Carausius (A. D. 287-93). No mint mark. Cf. Webb 889. This latter coin was not pierced.

Cinerary Urns and other Vessels. In Grave 20 were found a food-vessel, shown in pl. xxxvii, fig. 2, no. 1; a plain cinerary urn, rather fragmentary, containing fragments of a burnt skeleton, apparently that of a man over 30 years of age; and a spear (pl. xxxiv, fig. 1, no. 3). All were found close together and possibly associated.

In Grave 22, which we excavated ourselves, there occurred, with fragments of a skull, a festoon of beads with a Roman coin at each end; a bronze disc, possibly a pendant, belonging to the festoon; a fragment of what appears to be the rim of an applied brooch; a square-headed brooch (pl. xxx, no. 3); and the small complete food-vessel shown in pl. xxxvii, fig. 2, no. 2. The square-headed brooch and food-vessel lay by the right side of the head, the brooch between the vessel and the skull.

A very fine cinerary urn found by workmen when the discovery was first made has been restored and is shown in pl. xxxvii, fig. 1. Fragments of five other cinerary urns were found, two being ornamented, the others plain.

DETAILS OF GRAVES AND CONTENTS,
With description of skeletal remains by Professor Parsons, F.S.A.

No.	Position	Depth	Contents of grave	Sex	Skeletal remains	Notes
1	Feet to—	ft. in. 3 0	Umbo (part of).		Few fragmentary bones.	Remainder of skeleton probably removed during sewer excavations.
2		3 0	Knife (pl. xxxv, no. 4).		Few fragmentary bones.	Position not determined owing to lack of bones.
3		3 0	Nil. Possibly removed with remainder of skeleton.		Few fragmentary bones.	
4					Few fragmentary bones.	
5					Few fragmentary bones.	
6		1 2 to 1 6	Knife (pl. xxxv, no. 2). Spear (pl. xxxiv, fig. 2, no. 6).		<p>The skeletons comprised:</p> <p>(a) Fragments of the skeleton probably of a female about 18 years of age.</p> <p>(b) Male between 20 and 30 years. Platymeric index 74. No reconstruction possible.</p> <p>(c) Male between 30 and 40 years of age. Skull reconstructed. L. 196. Br. 147. Cranial index 75. Auric ht. 132. Rt. femur max. L. 459. Stature (calculated from this) 5 ft. 6 in. Platymeric index 94. Platymeric index 69. L. of radius 263.</p>	<p>This group comprised several skeletons very close together, fragmentary, and very difficult to keep separate. They were quite close to the surface and appeared to be lying in no definite direction; in one case N. and S. (feet to S.) and in two others E. and W. (feet to E.).</p>

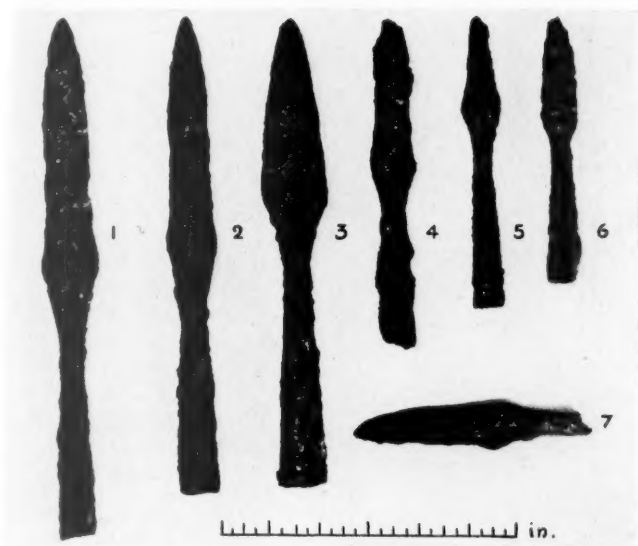


Fig. 1. Iron spear-heads

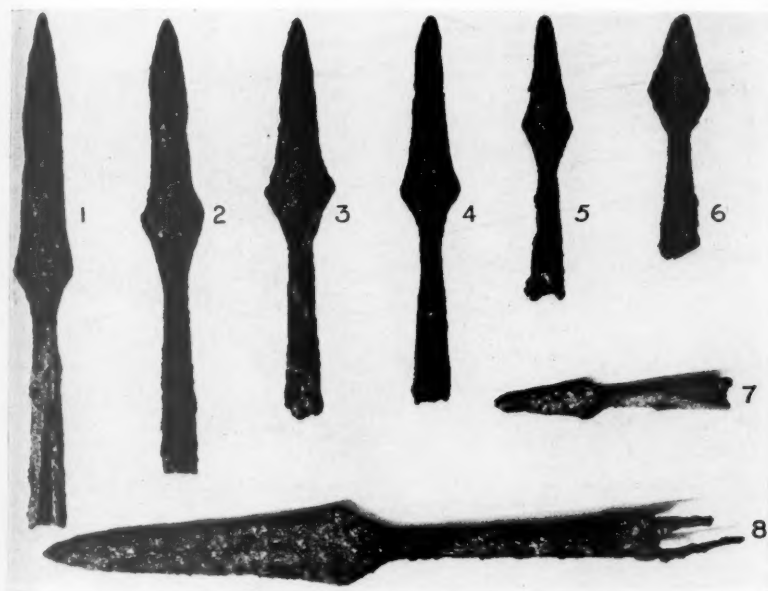
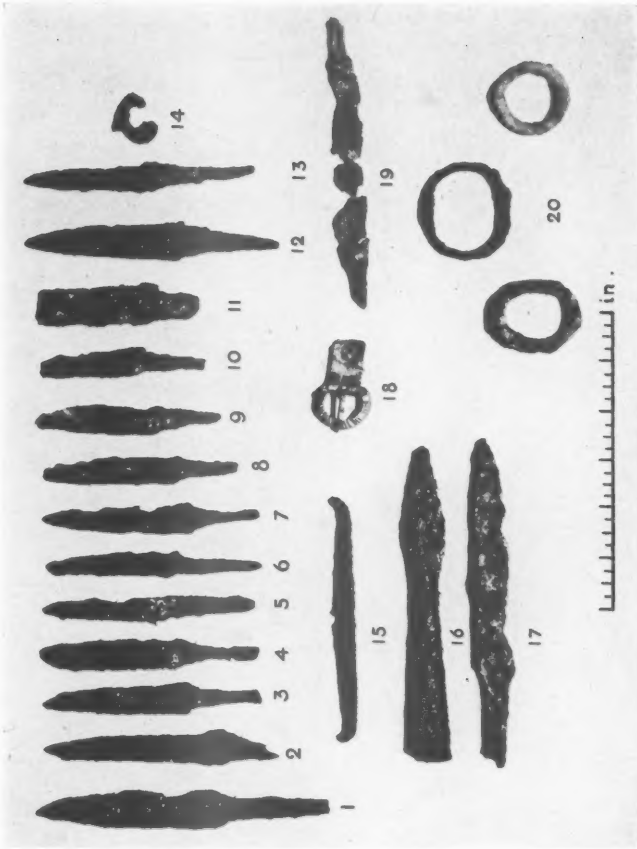


FIG. 2. Iron spear-heads (scale as fig. 1)



Iron knives, etc.

SAXON CEMETERY AT LUTON, BEDS. 187

No.	Position Feet to—	Depth ft. in.	Contents of grave	Sex	Skeletal remains	Notes
8	E.	2 6	2 disc brooches (pl. xxvii, fig. 2). Buckle (?) (pl. xxxii, no. 8).	F.	(d) Youth of about 17 years whose femur has been reconstructed. From the length of this bone he must have been 5 ft. 5½ in. in height. (e) Adult male. (f) Adult female.	The skeleton lay extended with its face inclined a little to S. Lower portion of skeleton removed during the sewer excavation. The brooches occurred on the clavicles. The position of the buckle could not be identified.
9 } 10 }						
11			Umbo (pl. xxxvi, fig. 2, no. 1; fig. 1, no. 2). 2 spears (pl. xxxiv, fig. 1, nos. 5 and 7).		Fragmentary bones only.	Remainder of skeleton removed during excavation of sewer trench.
12			Umbo (pl. xxxvi, fig. 2, no. 2). Knife, 4½ in. long.		Fragmentary bones.	Bones insufficient to determine position.
13					Fragmentary bones.	
15	E.	2 6		M.	Front of skull, with face, of a male probably between 20 and 30 years of age. Also some vertebrae.	

No.	Position Feet to—	Depth ft. in.	Contents of grave	Sex	Skeletal remains	Notes
16	—	1 0	Cinerary urn.		Unidentifiable.	
17	E.	3 2		M.	Fragments of skeleton of an old male. Signs of osteoarthritis in vertebrae.	
18	SE.	1 6		M.	Adult male, many of whose bones have been reconstructed. The skull sutures are united, showing that the owner was over 40 years of age. The teeth are perfect and well worn. The length of the femur shows that he was 6 ft. 2 $\frac{1}{2}$ in. in height.	
20		1 0	Cinerary urn. Food-vessel (pl. xxxvii, fig. 2, no. 1). Spear (pl. xxxiv, fig. 1, no. 3).	M.	Fragments of the skeleton of a burnt body, apparently that of a man over 30 years of age.	These were found on two different dates close together and may have been associated. The spear and food-vessel undoubtedly were. The cinerary urn contained bones.
21	E.	3 6	Umbo (fig. 1, no. 3). Knife, 4 in. long. Spear (pl. xxxiv, fig. 2, no. 8).	M.	Skull of male over 40 years of age.	The boss or umbo lay on the right side opposite the hip; the spear and knife on the right side by the head (positions given by workmen).
22	E.	3 6	Festoon of beads (44 glass; 22 paste; with pierced Roman coin (see p. 184) at each end (pl. xxxiii, no. 2).		Fragments of skull only.	Pot and brooch by right side of head. The brooch lay between the skull and the pot. Necklace over breast in form of festoon, with, as far as could be seen,

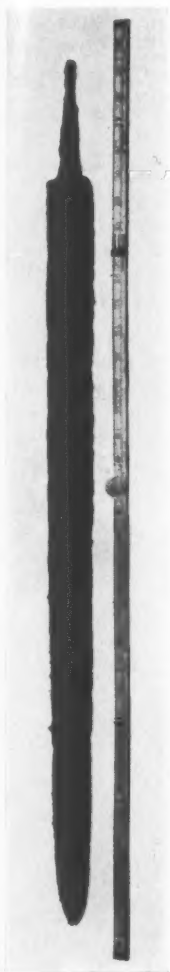


FIG. 1. Iron sword



FIG. 2. Iron shield-bosses



FIG. 1. Cinerary urn

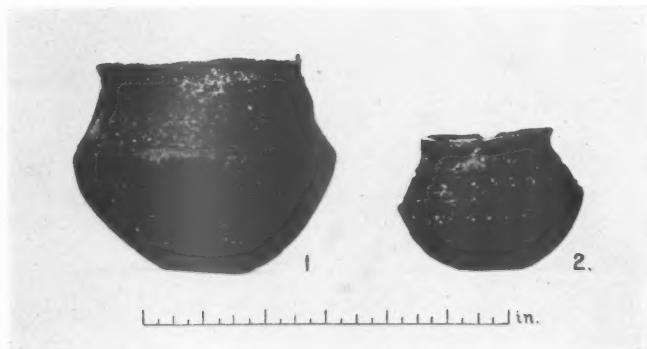


FIG. 2. Pottery vases

No.	Position	Depth	Contents of grave	Sex	Skeletal remains	Notes
	Feet to—	ft. in.				
23	E.	3 6	Part of bronze disc 1½ in. in diameter, pierced with two holes at top, probably originally attached to above. Bronze ring, probably part of an applied brooch. Brooch (pl. xxx, no. 3). Pot (pl. xxxvii, fig. 2, no. 2). 2 fragmentary applied brooches.	F.	Fragments of a female, aged 20-30 years. The skull has been reconstructed and gives the following measurements: L. 175. Br. 141. Auric ht. 120. Cephalic index 80. Orbital ht. 31. It must be noticed that these measurements are only approximate, since all the bones were separate before reconstruction. The skull shows a metopic suture. There is enough of the femur to show the usual platymeria or flattening of the shaft. The platymetric index was 74. There was not enough of any of the long bones to show the height of the individual. The tibia showed the usual transverse flattening of Saxon bones known as platycnemia, and the platycnemic index was 61.	the coins at the ends. Width of grave, 21 in. We were unable to get out more than 4 ft. of the grave, as the curb was in the way.
						Brooch by each clavicle.

No.	Position	Depth	Contents of grave	Sex	Skeletal remains	Notes
24	Feet to— E.	ft. in. 3 6	Spear (pl. xxxiv, fig. 1, no. 5).		Separate skull, bones, and teeth of a child of about 6 years.	Spear by right-hand side of head (point to W.).
25			Festoon of 47 amber beads. Wedge shaped (pl. xxxiii, no. 1).		Very fragmentary.	Found by workman who said the beads were in a festoon. Skeletal remains not kept.
26		1 0	Cinerary urn.			Solitary find.
27	E.		Festoon of beads (18 amber, 38 glass, 18 paste, 1 rock crystal) (pl. xxxiii, no. 3). 2 small bronze caps, evidently connected with the beads. 2 small strings of glass beads (one containing 52 and one 56). Gold ring (pl. xxxii, no. 9). 2 saucer brooches (pl. xxvi, nos. 3 and 4). Bronze pin, hollow, 2 $\frac{3}{4}$ in. long, probably belonging to a large square-headed brooch (cf. pl. xxix). Belt fastenings (pl. xxxii, nos. 10-13). Knife, 3 $\frac{1}{2}$ in. long.	F.	Parts of the skeleton of a female between 20 and 30 years of age. Skull partly reconstructed. L. 146. Br. 106. Cranial index 73. The stature estimated from the femur was 5 ft. 1 in.	Not observed. Found by workmen and information supplied by them. The skeleton was said to be lying on its back with its knees bent up as if sitting down. One lot of beads was found just above the level of each knee and from the position of the hands appeared to have been used as armlets. The main lot of beads was found in a festoon about the upper part of the stomach. A saucer brooch was by each clavicle. The belt fastening occurred round the waist.

No.	Position Feet to—	Depth ft. in.	Contents of grave	Sex	Skeletal remains	Notes
28			Small iron buckle. 3 fragments of iron. 2 square-headed brooches (pl. xxx, nos. 1 and 2). Knife, 5 in. long.		Fragmentary.	Not watched.
29			Buckle (pl. xxxv, no. 14). Knife (pl. xxxv, no. 13).		Bones very fragmentary.	Not watched.
30	ESE.		Nil.		Bones very fragmentary.	Not watched.
31			Knife (pl. xxxv, no. 19).			Knife on left side of hip. Lower half of grave undisturbed, rest destroyed in making sewer.
32	E.		Bucket (fig. 3). Spear (pl. xxxv, no. 16). Knife (pl. xxxv, no. 17).	M.	Parts of skull of male between 30 and 40 years.	Not watched.
33	E.		Sword, 33½ in. long (pl. xxxvi, fig. 1). Umbo (fig. 1, no. 3). Knife, 4½ in. long.		Not kept.	Found by workmen. The sword lay hilt to the W. on the right side of the skeleton. The knife lay in between the sword and the body. The umbo lay 3 or 4 in. above the sword.
34 odd.					Parts of two skeletons, one a male over 40 and the other a child about 6 years old.	Found near one another, by workmen.

No.	Position Feet to—	Depth ft. in.	Contents of grave	Sex	Skeletal remains	Notes
35 odd.					Fragments of the skull of a young person, probably a child.	Found by workmen.
36 odd.					Fragments of a child's skeleton, the teeth indicate that the age was a little over 6 years.	Found by workmen.
37 odd.				M.	Upper and lower jaws of a male, teeth much worn, but no wisdom tooth present.	Found by workmen.
38 odd.				F.	Fragments of skeleton of a female, aged 20-30 years. Skull partly reconstructed. L. 150. Br. 105. Cranial index 70. Auric ht. 114. R. tibia gives a stature of 5 ft. 1 in.	Found by workmen.
39 odd.				M.	Fragments of skull (partly reconstructed) and of the right clavicle of a male aged 30-40 years. Cranial L. 198. Br. 145. Index 73.	
40 odd.			Applied brooch (pl. xxviii, fig. 1, no. 1).	M.	Skull probably of a male about 40 years.	Found by workmen.

Excavations at Wookey Hole and other Mendip Caves, 1926-7

By H. E. BALCH, M.A., F.S.A., Local Secretary

[Read 17th November 1927]

I. Wookey Hole

IN the winter of 1926-7 the owner of Wookey Hole, Capt. G. W. Hodgkinson, undertook the cleansing and opening up of this great cave, and its illumination by electricity. He gave me control of the work, which has been carried out with scrupulous care to ensure that nothing undesirable should be done.

Incidentally, the considerable exploration which it was my privilege to carry out some years ago¹ provided a useful starting-point for the further development of the entrance gallery (the old cave-dwelling), and that portion still remains in the condition in which we then left it, apart from the erection of a rude supporting pillar of conglomerate, where a great hanging rock near the entrance threatened danger to visitors.

It became necessary to lower the floor along the whole of the remainder of the entrance gallery, from the termination of our former work to the first chamber; and, as might be expected, pottery and other objects of interest, with a few coins, occurred. These parts of the cave were not available during our former excavation, as the passage-way for visitors had to be maintained throughout our work. During the recent excavations the cave was closed to the public for the whole period.

Very few traces of the lower series of finds were discovered during this work, such as were found being almost entirely of the upper, Romano-British levels. Near the door, at a depth of 3 ft., was found a curious heavy pair of shears, of iron, such as might be used for cutting sheet metal. They are 8 $\frac{7}{8}$ in. in length and can only have been used by the metal acting as a spring. Though one blade was detached, they are in a fair state of preservation, considering that this is one of the damp parts of the cave. Immediately adjacent were coins of the fourth century A.D. and abundant fragmentary pottery of Romano-British type. At this depth too and close by was found a very perfect fibula of bronze (fig. 1), which I submitted to Mr. Reginald Smith, who

¹ *Archaeologia*, lxii, 565; lxiv, 337.

considers it to be of the first century A.D. It is $2\frac{1}{2}$ in. in length, is perforated in the foot, and has a decorated bow. There was also a strip of bronze, $2\frac{7}{8}$ in. long, with certain lines of decoration.

Finds of bone pins were not numerous, but the few which occurred are amongst the best found in the cave (fig. 2). The heads are elaborately wrought and one has a spiral decoration beneath it, an unusual feature. This specimen, which also shows cross-hatching on the head, was found on the sand of the approach to the new grotto, the only thing which occurred there, and the only indication that the cave-dwellers ever climbed to that elevated ledge of rock. This pin is $3\frac{1}{2}$ in. long. A large pin 4 in. in length, from the main passage, has a bold, acorn-shaped head and three incised lines round the shaft. A third, which lacks its point, has a faceted head, as in earlier finds from this cave.

A square or oblong object, in lead, is new to us. It was found near the entrance, is $1\frac{5}{8}$ in. by $1\frac{3}{8}$ in. by 1 in., and weighs 5,700 grains. I should value a suggestion of its purpose. A piece of imperfectly smelted iron also occurred, 3 in. by $1\frac{1}{2}$ in., as did a well-wrought iron drill, 5 in. in length, bearing traces of its wooden handle. Another curious iron implement looks like part of a horse's bit.

Spindle-whorls were not numerous. One small whorl of Lias occurred; and a remarkable one in Kimmeridge shale shows not only the usual central perforation, but, equidistant on either side of the central hole, two semi-perforations, unlike anything hitherto found in this cave. It is lathe-turned.

A fragment of a bone bracelet shows lines of decoration. There was a number of broken bone bracelets of a different type found in the earlier exploration. Two additional potting tools were found.

In the first great chamber there is a series of deep stalagmite pools. In one of these stands a large island stalagmite with a low conical summit. As there was a deep accumulation of mud, it was decided to syphon out the water to the river below. In doing this it was found that the pool most distant from it was emptied at the same time, though the intermediate pool was not affected. The island stalagmite proved to have a deep hollow in its side, and in it lay a portion of a hand-made vessel. More than a foot of slime lay in this pool, and was removed before the crystalline floor was reached. The piece of pottery has no accumulation of lime upon it, in spite of its long sojourn in this crystalline pool. Alongside we found buried in dirt and ashes the original continuation of the stalagmite bank on which the pools lie. There had been numerous little cavities in this, and in all of them were

very small fragments of Samian and black ware, showing that it was the custom of the cave-dwellers to come down to these lovely pools for water. Possibly earlier remains may be embedded in the stalagmite floor, but this cannot be investigated. In the entrance gallery near the first chamber a fragment of Romano-

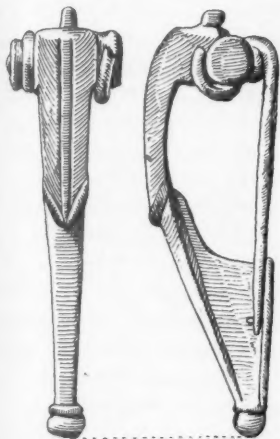


FIG. 1. Bronze fibula ($\frac{1}{2}$).

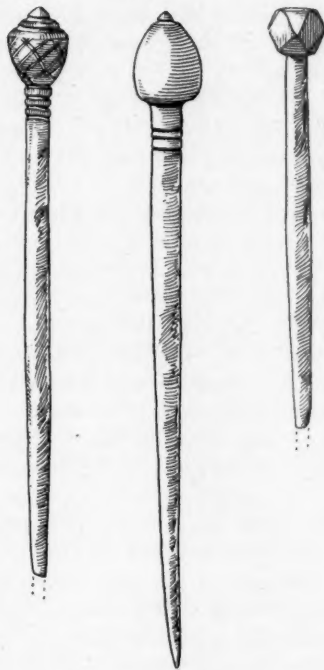


FIG. 2. Bone pins ($\frac{1}{2}$).

British pottery was seen to be covered by $1\frac{1}{2}$ in. of stalagmite where a pretty sealed-down cave-pearl cavity had incorporated it in its mass.

In the second chamber—a lofty cavity 75 ft. in height—it was found to be desirable to level the flood-borne sand on the west side and remove it to the river bank. Beneath was found an extensive stalagmite floor, and in a recess in this was found a portion of a Romano-British vessel of a common type. This also bears no incrustation of lime.

It is obvious, therefore, that the cave-dwellers frequented the whole cave. They were aware, without a doubt, of the strange noises that from time to time are heard there, the knowledge of

which spread so far that Clement of Alexandria heard of them. Those mentioned by him, the 'clashing of cymbals', have been observed several times during the work in the cave, together with a variation of these noises, which the workmen described as like the galloping of horses overhead. Recent work has disclosed a vertical hole, hitherto unknown, ascending through the roof of the third great chamber, which brings back the echo of the human voice as from some large cavity above, which is still unknown to us.

In the course of the cleansing operations in the cave, the removal of mud and soot from the walls has disclosed the fact that there are various old inscriptions on them. Many are superimposed, but some are clear and range from 1600 to 1800. In the seventeenth and eighteenth centuries there was evidently a considerable number of visitors to this cave.

Among the most interesting finds, however, and a fruitful field for inquiry, are certain facts connected with the natural effigy known as 'the Witch', which stands at the head of the subterranean river Axe, in the first great chamber. In cleaning the floor of its debris it was found that a series of steps, carved in the stalagmite, lead from the water's edge to the back of this effigy, and lead nowhere else. Further, that on the lower part of the figure there are definite marks of wear and manipulation, and a hammered-out socket, as if for the top of a post. These were invisible until the covering of dirt and soot was removed, for everywhere were traces of fire and smoke, from ages of careless illumination. A post-hole containing decayed wood existed in the floor below. There can be no doubt that this curious human form was well known to the cave-dwellers and to their predecessors in the Mendip region. A figure in such weird surroundings can hardly have failed to inspire awe among the people, for Wookey Hole is surely an ideal gateway to the underworld.

With the enlargement of the entrance gallery it has been possible to take in a boat for the exploration of the waterway, and we have begun the exploration of a great passage which exists on the other side of the river in the first chamber. Here, reaching it by raft years ago, I found fragmentary human bones and pottery, much waterworn. We are clearing deep debris from this filled-up passage, but so far it has been barren.

With the boat available, we have entered and examined the fourth large chamber, a double vault with a hanging mass of rock between, 40 ft. high in one part and about 50 ft. in the other. There is no landing, but deep water everywhere, and the feeder passages are deeply submerged and invisible. I think we are here

at the entrance of the older limestone caves and that these have never been raised again to their original level. If so, they are permanently closed to us.

II. *Rock shelter at Ebbor*

It may be worth while to glance at the cave shelters in this gorge as a whole, in view of my recent find of flint implements there. These shelters consist of little natural caves at various levels in this carboniferous limestone ravine, lying nearly a mile to the west of Wookey Hole. The gorge was probably a cave at no very distant time. The Triassic conglomerate fills its upper end and creeps into its entrance, but does not invade the valley, nor does any later deposit.

Shelters occur along its whole length, being probably little tributaries of the vanished larger cave. That farthest up the upper gorge is on the southern extremity of Higher Pits Farm and appears to be an old point of engulfment, though now removed some thirty feet above the bottom of the valley. It was superficially excavated many years ago, in an attempt to discover if it afforded an entrance to a hidden cave. The deeper levels were untouched. A mass of remains of the smaller animals exists there, accumulated from the hawks' nests in the rocks above.

Farther down the upper valley and considerably above the gorge proper, on the western side and close to the bottom of the valley, is a shelter which would repay investigation of its deeper levels, if the mass of impeding debris were removed. This I hope to effect at some future time.

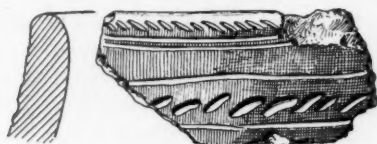
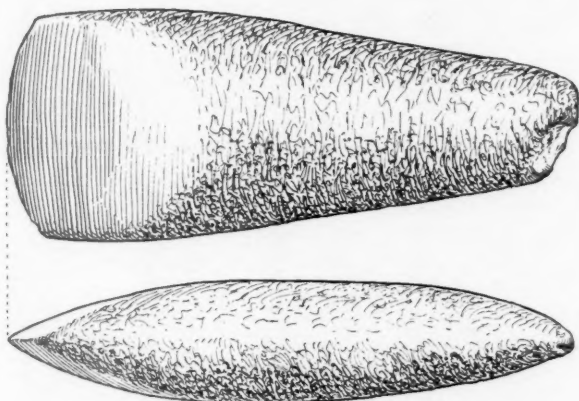
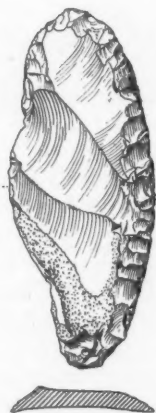
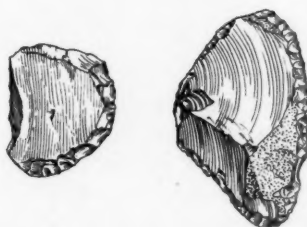
This brings us to the gorge proper, and here there is a considerable series of shelters, most of them untouched, one being the subject of the present paper. They exist at all levels, over a range of more than 250 ft. vertical, and we know twelve of them to-day. Probably all of them except one or two will yield results on excavation. Generally they are nearly or quite filled to the roof with the accumulation of ages—scree, leaf-mould, and animal remains. Usually also some tufa occurs lying on cave-earth. Here and there a screen of ivy coming down from the cliff above obscures them, and I have little doubt that there are others so well concealed that more careful search is required before they are found. One of these shelters has a kind of mound of loose rock in front of it and well removed from the overhanging cliff, much like a series of mounds or cairns which exists near a cliff high on the side of Mendip near Draycott. I have no doubt that interesting excavations might be made in all of these.

To come now to the subject of the present work. Last year I began the examination of a fairly large shelter on the east side of the gorge, 80 ft. above the rock-strewn floor of the valley, and 45 ft. above the only little spring in the limestone, yet marvellously concealed, so that the workers have been at a loss at times to locate it directly. I have named it 'the Bridged Pot-hole Shelter', for a reason that will be obvious.

When I began work there at Easter 1926 it appeared as a wide outer porch, with a floor of leaf-mould, and an inner recess hardly high enough to enable one to stand upright. The removal of 2 ft. of debris and fallen rock from above revealed first a few fragments of hand-made black pottery, confined principally to one corner of the front of the shelter. The second foot yielded similar results, but included one fragment showing decoration on rim and neck (fig. 3). It might well be a fragment of beaker. No other pottery occurred in the shelter. The fragments of rim appear to indicate shallow bowls with nearly vertical sides.

At a depth of 3 ft., and just where the floor debris changed suddenly to undisturbed white tufa, we found a large and perfect polished celt of an unrecognized stone (fig. 4). It appears to resemble the greenish dolerite of the eastern ridge of Mendip. It is 7 in. in length, and compares closely with Evans, fig. 67, from the Thames. On the same level precisely, and 2 ft. away, occurred a very perfect knife of flint with deep white patination, beautifully worked along its cutting edge (fig. 5). It is $4\frac{1}{4}$ in. long and $1\frac{1}{4}$ in. in maximum width, and its flaking is fine and delicate. I had no doubt that it was contemporary with the celt, but in view of the later discovery I am now doubtful. It may have been brought up by burrowing animals. I have never seen a knife of this type from the surface of Mendip, though knives of other types abound (fig. 6, *b*). One short scraper (fig. 6, *a*) and a number of other flakes occurred just below this horizon. Here, too, was a number of fragmentary human bones, but no skull or long bones.

Over the whole floor within the shelter the debris was now white tufa, changing as it reached the outer porch to angular scree with very little earthy mixture. The tufa was here and there compact, but more commonly loose, and, both within and without the shelter, nearly barren. In the few bones from the fourth foot, which marks the Late Pleistocene, Mr. J. Wilfrid Jackson has identified *Rangifer tarandus* (L) (reindeer), *Equus caballus* (L) (horse), *Meles taxus* (badger), *Vulpes vulpes* (common fox). Bird bones are also scanty, but he identifies *Lagopus scoticus* (red grouse), which was abundant in the excavation at Chelms's Combe at Cheddar last year. This stratum is therefore Late Pleistocene.

FIG. 3. Fragment of pottery ($\frac{3}{4}$).FIG. 4. Polished celt ($\frac{1}{2}$).FIG. 5. Flint knife ($\frac{1}{2}$).

a. *b.*
FIG. 6. Scraper (*a*) and
knife (*b*) ($\frac{1}{2}$).

It became apparent that the floor was changing into a very curious natural bridge of limestone, pierced with a hole 18 in. wide in the middle, and with a horseshoe-shaped hollow on the inner edge. The tufa passed beneath it. It became necessary to cut down the outer ridge, which was being left behind in the digging, and shortly there was disclosed in a niche in the limestone,



FIG. 7. Flint leaf-shaped blade ($\frac{1}{2}$).

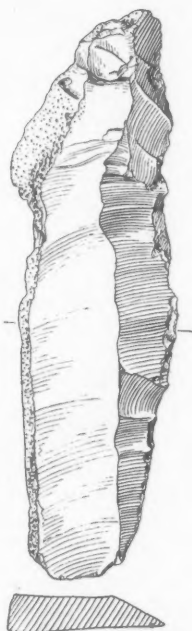


FIG. 8. Flint knife ($\frac{1}{2}$).

which came away with the pick, a hoard of eleven large flints, placed with their sides touching each other, and on edge. These are of a type and of a size unknown to me in Mendip until now, and afford a field for inquiry.

Comparative material does not abound elsewhere, as it is fairly clear that we have before us a group of implements with varying characters, yet all of one age. It is quite obvious that they may have been concealed in the place where we found them at any period, as the concealing material apparently was placed upon them and the whole covered by the overshot debris of later date. Mr. Reginald Smith has examined them and his report on them is interesting. The large leaf-shaped blade, $6\frac{1}{2}$ in. in length and

3 in. in width (fig. 7), he considers to be like a proto-Solutré implement. Fig. 8 is a long, straight, thick-backed knife, $6\frac{7}{8}$ in. long,

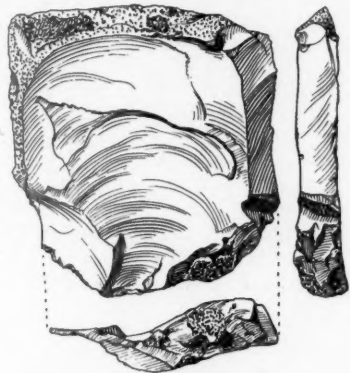


FIG. 9. Flint scraper ($\frac{1}{2}$).



FIG. 10. Flint scraper ($\frac{1}{2}$).



FIG. 11. Flint knife ($\frac{1}{2}$).

and with marks of long service. Fig. 9 is a large, square-edged scraper, 3 in. by $3\frac{1}{2}$ in., and is, I believe, unique in Mendip. Mr. Reginald Smith points out its analogy to finds from St. Brelade Cave, Jersey. Fig. 10 is a large implement, $4\frac{3}{4}$ in. by 3 in., with a curved point worked to a horseshoe scraper. It also has a marked notch worked in its side. Fig. 11 is a large leaf-shaped

knife, $5\frac{1}{2}$ in. by $3\frac{1}{4}$ in., of which the middle part has seen rough use. Its removal from a tortoise core is quite clear. Fig. 12 is a well-

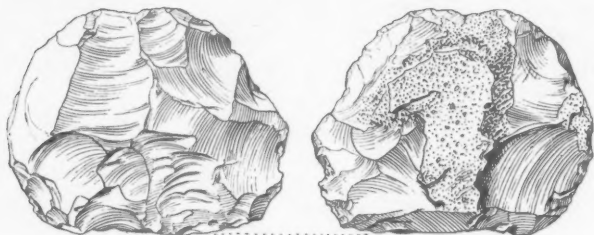


FIG. 12. Flint implement ($\frac{1}{2}$).

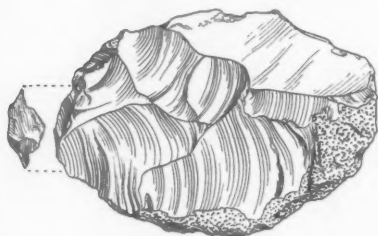


FIG. 13. Leaf-shaped implement ($\frac{1}{2}$).

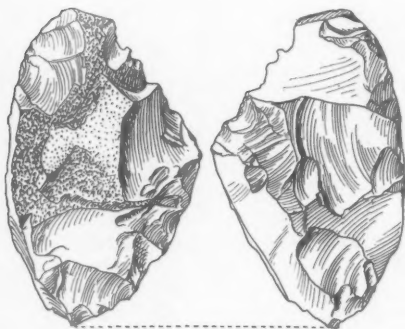


FIG. 14. Curved flint knife ($\frac{1}{2}$).

wrought oval implement of which a portion of the outer crust still adheres. Fig. 13 is a blunt leaf-shaped implement, 4 in. by $2\frac{3}{4}$ in. Fig. 14, a shorter curved knife, $3\frac{3}{4}$ in. by $2\frac{1}{2}$ in. Figs. 15, 16, and another not illustrated complete the find, which, looked at collectively, leaves a strong impression that we are dealing with imple-

ments earlier than have hitherto come from the caves of Mendip, except the Hyaena Den of Wookey Hole.

Mr. Reginald Smith points out that 'their date is hard to fix. There are three irregular flakes with faceted butt. The resemblance to those from Arbor Low is remarked. Dr. Peake has similar flakes from Grimes Graves, and there are others in the British Museum from Northfleet and Le Moustier itself.'

In the hope of finding in the animal remains some useful evidence to help in dating this hoard, I last week made an advance



FIG. 15. Flint implement ($\frac{1}{2}$).



FIG. 16. Flint implement ($\frac{1}{2}$).

cut for a farther foot into the floor. The material, however, was still very barren, 90 per cent. angular stone, and the only fresh find is the extinct cave pika (*Ochotona spelaea*) identified by Mr. J. Wilfrid Jackson, whilst a large bird resembling *Lagopus* and reindeer also occurred.

This extensive nearly barren deposit of tufa and angular limestone persists in all the cave-shelters.

We have now cut down through $1\frac{1}{2}$ ft. of white tufa and $1\frac{1}{2}$ ft. of reddish tufa in the inner shelter, and this is about to change to debris more like that in the outer porch of the cave, but with some cave earth, and what lies therein has yet to be determined. I had hoped to complete the work this season, but lack of time and the inclement weather have prevented this. I think I can safely assert that whatever lies below has not been mingled by the action of burrowing animals, as the stratum of tufa is not in any way mingled downwards, and only to a small extent upwards.

Looking at the contents of these elevated shelters broadly, it seems that they have been occupied only very rarely and at long intervals of time, that they have rather been temporary shelters in

some time of danger, the occupant hiding his scant possessions and intending to return for them, which the perils of existence prevented. Thus items of successive periods became entombed till revealed by the spade. There is certainly no sign of continuous occupation. In some ways this is an advantage, as the lines of demarcation are in consequence more pronounced. There is every



FIG. 17. Lance-head ($\frac{1}{2}$).

possibility that a considerable depth of Pleistocene material may lie beneath our feet in this shelter, and an inner cave is not impossible. I anticipate coming into the zone of the larger carnivora in the near future, as I found them in the neighbouring shelter, the Outlook, as we call it, where also I found reindeer and the pretty lance or arrow-head illustrated (fig. 17). I should say that the position in which this latter lay when found precisely compares with that of the hoard, though the condition of the flint is utterly different. The inference is that the deeply patinated, almost decomposed flint of the hoard must be much older.

III. *Soldier's Hole, Cheddar Gorge*

During the winter of 1925-6 an important excavation was carried out in a great cave shelter at Chelms's Combe, west of Cheddar Gorge, the result of which was published in the report of the Somersetshire Archaeological Society for 1926.

During this year a beginning has been made on a great cave-shelter high in the cliffs, near the main road through the gorge of Cheddar, and on the estate of the Marquess of Bath. This great shelter is one of the largest of its kind in Mendip, and remained unknown to us in consequence of its inaccessibility and its wonderful concealment by shrubs. It has been known, however, to a few old Cheddar folk, under the name of 'Soldier's Hole'. The reason for the name is lost, like that of the neighbouring extensive and ancient river tunnel of 'Great Oon's Hole'.

Soldier's Hole is situated immediately above the large unexplored shelter known as 'Cooper's Hole' on the right-hand side of the road above Gough's Cave, on the south side of the gorge, and is about 150 ft. above the road-level. It is reached by a risky traverse of about 30 yards along the cliff face, after climbing to a point level with it, and here we usually employ a rope, made fast to a bush and to a bar driven into the earth. Climbing through a natural shrubbery, we reach a level floor 27 ft. from front to back and from 19 ft. to 28 ft. in width. The roof forms nearly a horizontal plane, and, except on the eastern side, the walls

are nearly vertical. In the south-east corner a passage filled nearly to the roof with cave-earth indicates an unexplored extension. The floor, when we reached this place, showed signs of burrowing, though it was proved that the burrows never reach 2 ft. below the surface. A few fragments of pottery were visible, doubtless brought up by the rabbits.

It was impossible to bring the contents of the cave to the outside, as the precipitous descent would cause danger to passers by, so it was decided to explore half of the floor at a time, afterwards transporting the debris back to the explored area, and doing the second part subsequently.

At 1 ft. in depth against the north-east corner of the shelter a very perfect flint celt with polished edge was found (fig. 18). It is 4 in. in length and is polished for $1\frac{1}{2}$ in. It is probably fairly early Neolithic. It compares exactly with the series from Seamer Moor, N.R. Yorks., now in the British Museum, and figured in a paper by Mr. Reginald Smith in *Archaeologia*, vol. lxxvi. It is slightly coated with tufa.

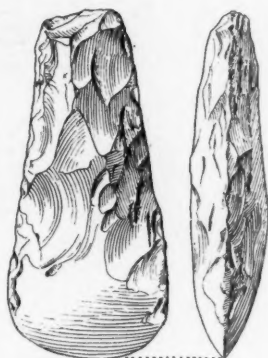


FIG. 18. Flint celt ($\frac{1}{2}$).

Pottery in a very fragmentary condition occurred throughout the excavation, and exhibits some features of interest. Fragments of one vessel only of typical Romano-British ware occurred, and there is a complete absence of coins, in contrast to the shelter above Gough's Cave near by, where coins occurred in large numbers, and no pottery other than Romano-British.

The great majority of the fragments are portions of plain vessels, hand-made, and much like the plain ware of the Somerset lake-villages and the cavern of Wookey Hole, of the lower levels. Two vessels with slight rims are of especial interest, that numbered 13 being from a depth of 15 in. in the floor debris. In the same area occurred three fragments of decorated curvilinear pottery which precisely reproduces that from Wookey Hole (fig. 19). More interesting, perhaps, are the fragments of two vessels which, occurring 1 ft. deep in the tufa, should belong to the same period as the flints from that zone. One of these is new in Mendip. It was 8 in. across, had a very bold incised decoration of three lines above and below its band of deep diagonal decoration, and it had a pierced lug with a horizontal hole for suspension, its base being yet unknown (fig. 20). A second vessel of the same type is

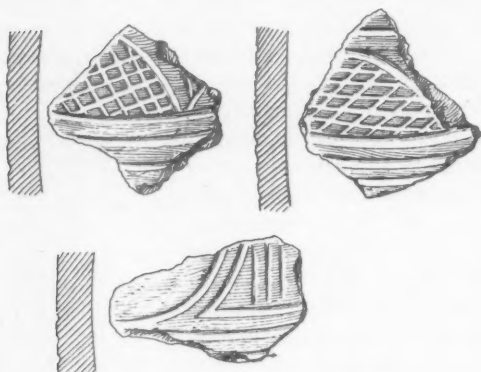


FIG. 19. Pottery fragments (3).

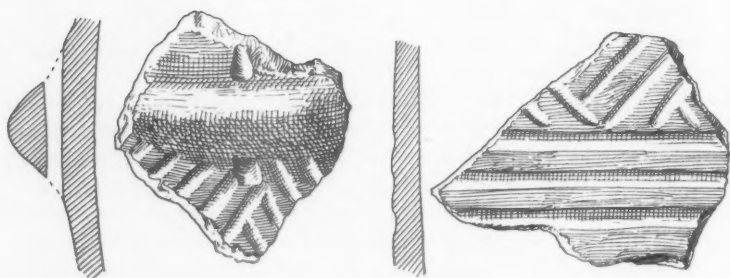


FIG. 20. Pottery fragments (3).

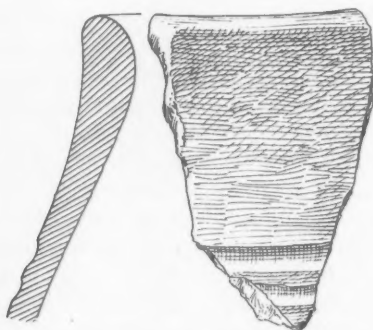


FIG. 21. Pottery fragment (3).

indicated by one fragment of rim, having two shallow lines of decoration (fig. 21). There are three fragments of a very massive vessel with a flat-topped rim of $\frac{3}{4}$ in. thickness and with deeply impressed cord decoration. Probably more fragments of these vessels will be found when we can uncover the other half of the floor.

Over a large area on the eastern part of the shelter, from just below the surface to a depth of 2 ft., our present limit, occurred

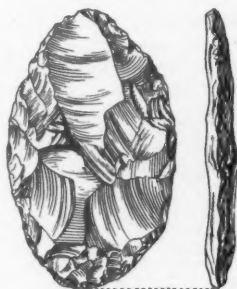


FIG. 22. Oval implement ($\frac{1}{2}$).

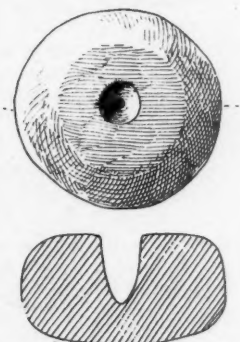


FIG. 23. Spindle whorl ($\frac{1}{4}$).

a bed of white tufa, at places loose and at others compact. This is of frequent occurrence in the cave-shelters of Mendip and is usually little mingled with other debris. Apparently the rabbits do not like it for burrowing, as it clings tenaciously to the fur.

In this tufa a small series of interesting flint implements occurred. Fig. 22 is a nearly oval implement, perfectly symmetrical and equally worked on both faces. There are slight marks of damage by use at one point, so it was probably mounted in a shaft. It is of black flint and not patinated. There is a large knife 5 in. in length and $2\frac{3}{4}$ in. in breadth, worked on one side and showing the first traces of patination on part of its surface. We also found a long scraper of duckbill shape, worked on the bulb end, and of a type rarely seen on the surface of Mendip. There was a very delicate and finely-worked saw, $3\frac{1}{8}$ in. by $\frac{1}{2}$ in., with teeth of fretsaw fineness on one edge, and a curved knife, finely wrought on one edge. Other implements in stone include round pebbles, one of sandstone and the other of conglomerate, and three small pebbles, probably gaming-stones like those of Wookey Hole.

Fig. 23 is the only whorl found in the cave up till now. It is

small, $1\frac{1}{4}$ in. by $\frac{5}{8}$ in., only half perforated as by a quill, and is of burnt clay.

Various interesting implements in bone occurred. Fig. 24 is a flat needle, now $2\frac{7}{8}$ in. in length, and having been broken at the eye, has been again perforated half an inch from the end. Fig. 25 shows two small discs of bone, $\frac{3}{4}$ in. and $\frac{7}{8}$ in. in diameter and

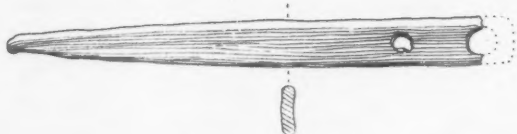


FIG. 24. Needle ($\frac{1}{4}$).

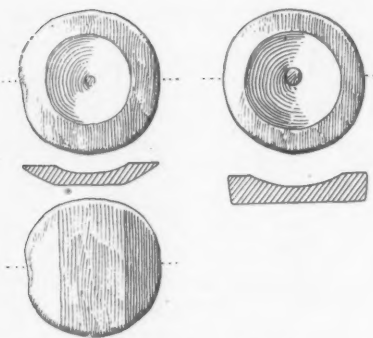


FIG. 25. Bone discs ($\frac{1}{2}$).

$\frac{1}{8}$ in. thick, and in the face of each a shallow depression has been countersunk, showing a tiny central point round which the boring implement has rotated. They are unique in my experience. An antler tip, twice perforated, but broken, compares closely with other implements from Wookey Hole and the Lake Villages. A boar's tusk, perforated as if for suspension, also occurred. A 3 in. portion of red-deer antler has been pierced endwise to form a handle for some implement unknown. There were also found a 3 in. antler tip and a tooth of dog or wolf which appears to have been shaped into an implement.

So far as we have gone, then, in the two shelters named, it is fairly clear that the upper 2 ft. of debris brings us to the neolithic level; that in the case of the Ebbor shelter we have passed into a stratum containing reindeer, cave pika, and red grouse; that an earlier occupation is indicated by the hoard of implements, un-

disturbed from the day they were hidden, and that there is a floor still beneath our feet which appears undisturbed, and holds out promise of interesting results. An outstanding fact is that the three recent explorations of cave-shelters by us, Chelms's Combe, Cheddar, the Bridged Pot of Ebbor, and Soldier's Hole at Cheddar, show the first evidence of a neolithic occupation of the caves of Mendip.

DISCUSSION

Mr. REGINALD SMITH drew attention to the difficulty and danger of cave-exploration, and congratulated Mr. Balch on his enterprise and the results obtained. An outstanding discovery was the hoard of eleven flints found on edge, side by side on a ledge of rock between the neolithic stratum and the palaeolithic brick-earth. Its date was a problem, but the recent recovery of pika and reindeer from the same level was in favour of an early date, while the depth and uniformity of the patina were both remarkable, in view of the sharp condition and almost unchanged black of the neolithic flints above, which were at least 4,000 years old. The most striking implement was a leaf-shaped blade which was more likely to be a proto-Solutré production than a rough-out for a dagger of the early Bronze Age; and the remainder suggested a still earlier date. An oval flake implement with faceted butt was typical of the Northfleet (Levallois) industry, and other flakes, not so successful, were evidently produced in the same way from tortoise-cores, and had analogues from a rocky shelf in the fosse at Arbor Low, from Grime's Graves, as well as Northfleet and the recently discovered Frindsbury floor above the high terrace opposite Chatham. A date that suited all those sites was difficult to find. The material at Ebbor and Arbor Low was evidently brought from a distance, and was quite unexpected in such surroundings. The white side-scraper associated with the polished celt of volcanic stone (or at least found on the same horizon) might be much earlier, possibly of the early Cave-period, but the celt, with another of flint polished near the cutting-edge, was good evidence of a neolithic occupation in the megalithic period. The pottery he had been unable to examine, but it was clearly unusual and might elicit opinions from some of the experts present.

Mr. ST. GEORGE GRAY had found the flakes referred to at Arbor Low (*Archaeologia*, lviii, 469); they constituted a small hoard on the ledge of the ditch, and on the inner side of the rampart. They must have been covered up suddenly by silting when the edge of the ditch was allowed to fill up. The same site had produced a leaf-shaped arrow-head above one with barbs and tang, apparently in the wrong sequence; and the chronological evidence might help to clear up the Ebbor problem.

Dr. WHEELER confirmed the dangerous nature of cave-work, and had noticed in a catalogue a work on cave-hunting under the heading of Sport, with others on lion-hunting. The Wookey Hole finds were

Romano-British and once more showed that some of the poorer population inhabited caves in the early centuries of the Christian era. Hut-circles in Hampshire and elsewhere proved that life was passed in prehistoric conditions after the Roman conquest. He noticed the resemblance of the white blade from Ebbor to flint daggers of the Beaker period, and remarked that patina was often an untrustworthy guide. The typological difficulty was exaggerated by the roughness of the work, and he thought such flakes were not impossible in the Neolithic period. On the other hand, leaf-shaped Solutré blades were being found elsewhere in England, and the question should be left open, though he was in favour of a Late Neolithic or Early Bronze Age date for the Ebbor hoard.

Mr. BUSHE-FOX said Mr. Balch and the Society were to be congratulated on the paper; and other excavations in Somerset, at Glastonbury, Meare, and Taunton Castle showed the vitality of the county Archaeological Society. He doubted the spindle-whorl of shale, and thought it rather a chuck from the lathe, the centre of a bracelet or other ring. One of the pottery fragments was remarkable for its chevron pattern and big handle, which, although possibly Late Bronze Age, was more likely to be an addition to the Hallstatt series found in England. He recalled somewhat similar types from the cemeteries of southern France and the Pyrenees. The Glastonbury type was also represented; the bronze brooch was early in the second century; and still larger iron shears had been found at Richborough.

Dr. FAVELL thought the work done was highly satisfactory, and referred to the discovery of the same type of flint at Ebbor, Arbor Low, and Northfleet. The Grime's Graves series was a separate problem, but it was possibly from that site that the flints in question reached Derbyshire and Somerset, and they might have been patinated before arrival.

The PRESIDENT regretted that some of the more picturesque details of the paper had not been discussed, and conveyed the Society's appreciation of Mr. Balch's excavations and report.

Cross-head from Berrow Church, Somerset

By W. D. CARÖE, M.A., F.S.A.

[Read 1st December 1927]

THE little church of Berrow, which lies behind the sandhills on the Somerset coast of the Bristol Channel a few miles north of



FIG. 1. Berrow church, interior: showing niche in north wall.

Burnham, has a nave, chancel, and south aisle only. Its walls were besmeared with a thick coat of modern plaster, on the removal of which a niche of considerable dimensions was found in the centre of the north wall (fig.1). Its projecting ornaments had been stripped off and its cavity built up flush with the general wall line with brickwork on edge that could not have been much later than the Commonwealth. On the removal of these bricks a tabernacle cross-head was found behind them. It was in eleven fragments; one large main piece comprising all the figures, seven small ones, whose fractures fitted on exactly, and which I have put back into their proper positions, and three others belonging to the lost upper part, which cannot be replaced. All are in Ham Hill stone. In addition to these there were inserted in the niche

many fragments of carved work in a different stone, some of which may have been parts of the niche itself or, more possibly, of a reredos, but there is no certainty. On visiting the church to examine and report on these fragments I naturally set on foot a search for the cross-base, and was soon rewarded. Some 30 ft. south of the porch was a fragment of an octagonal shaft, 11 in. in diameter, and projecting some 9 in. above the ground, which rises sharply at this point from the level of the porch entrance. Excavation disclosed 2 ft. 2 in. of shaft with four of its eight facets stopped into a square of $11\frac{5}{8}$ in. sides—morticed and leaded into a fine and perfect base stone, 2 ft. 6 in. square at base, 1 ft. $7\frac{1}{2}$ in. high, with chamfered octagon of $12\frac{1}{2}$ in. sides, stopped in the conventional manner of the fourteenth century (fig. 2). All this is of white lias stone from near Bleadon. I may remark in passing that Pooley, the author of 'Somerset Crosses', discovered this base before 1877, and relates that there were once many steps under the base, up and down which an old man of seventy-six stated that he had climbed as a boy, i.e. about 120 years ago. No doubt the changing blown sand had gradually crept up until the whole was almost absorbed.

But Pooley did not grub deep enough. The more thorough excavators of to-day found that the cross-base was resting upon the bowl, quite perfect, of a thirteenth-century font—quatrefoil shaped on plan, 2 ft. 7 in. by 2 ft. 7 in. by 1 ft. 7 in. high (fig. 3). It was standing upright upon the sand, but without its base. Around it still remain *in situ* stones which might be portions of built-up steps. This font was 3 in. out of centre of the vertical axis of the cross. It is made of Douling stone, and has almost a counterpart in the font still in use at Brent Knoll, the adjoining parish. It had a hinged and locked cover as usual, the rim being rebated.

If this font (one side of which projected, when found, 3 in. beyond the edge of the cross-base resting upon it, and the two other sides $\frac{1}{2}$ in.) were originally used as a foundation, its extreme projections would have shown upon the top platform of the steps. This at least would seem to be most unlikely in original work. Fonts, moreover, were objects of reverence in medieval times, rather more so than other church fittings handed down from the past. Here I must trespass into the doubtful realms of imagination. The present font is Laudian. Is it possible to surmise that the old font was not considered elegant enough by the Laudian diehards, and was thrown out in favour of a new and more elaborate one, cut in the last prevailing medieval style, which they were trying to revive, and which Laudian designers knew most

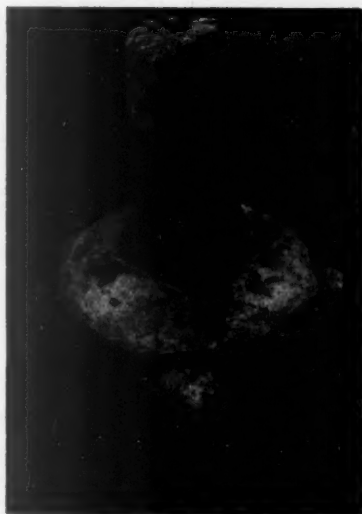


FIG. 2. Cross-base after excavation.

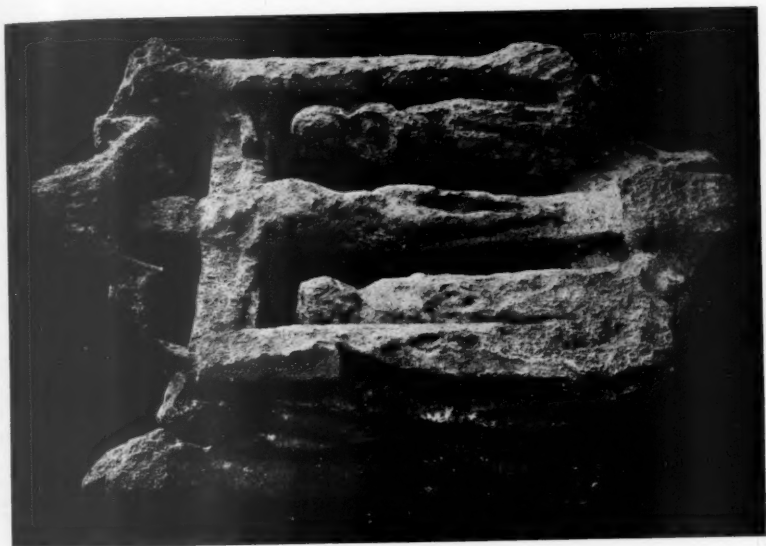


FIG. 3. Under side of font found beneath cross-base.

about, as its traditions still lingered among them? If the Laudian revivalists had also wished to set up again the old cross which the early Puritans had thrown down, one can well imagine their using the font they had discarded as a convenient block with which to make a foundation. Laud himself was bishop of the diocese 1626-8. 1644 was the date of the general destruction of churchyard crosses by the Roundheads, so perhaps we may imagine some keen Cavalier who had but a few years before set up this ancient cross again, on seeing it so soon thrown down by his ascendant enemies, hiding its fragments securely away till happier days came. There it was forgotten but protected and preserved, for our appreciation in these latter days.

The cross-head is 2 ft. 4 in. high, $16\frac{1}{2}$ in. wide, $10\frac{1}{8}$ in. thick, a somewhat large example of its type, by no means an uncommon one. To support the tabernacle four carved crockety leaves spring out of an octagonal stem, 7 in. in diameter, indicating clearly that, as at Stringston and Wedmore, there was some form of cap with a receding weathering or reducing piece between the top of the main shaft and the under side of the cross-head. Tucked in between the spreading leaves on each main face and forming a support to the figures above is an unusual feature—an uncrowned head with solemn features. It occurred on both sides, but only one is preserved. Adam has been suggested. The central figure of the crucifix is upright, the toes just being crossed (pl. xxxix). If there was a label on the cross-head it has fallen away. The Virgin has hands crossed on the breast. St. John supports his head on his left hand, his right is worn away. A curious feature is a rusty iron plug in the neck, which has flaked the stone away in rusting. On the reverse are three female figures—a tall Virgin in the centre with the Child on her left arm, the right supporting His feet (pl. xl). On the Virgin's right is the Magdalene holding the pot of ointment; on her left St. Catherine of Alexandria with her wheel (at least, so I read it, but am open to correction). All three figures are crowned. St. Catherine occurs on the cross of Tellisford, now in Taunton Museum, of the same date as this, found in 1854 in a recess in the east wall of the church, about 4 ft. from the floor. Thus the circumstances of the two finds closely resemble one another.

At the north end (if the crucifixion faced east) is a figure of a warrior with a lance held in his right hand, a shield slung over his shoulder, and a sword on a sword-belt, the armour being of the latter part of the second half of the fourteenth century, which determines the date (pl. xl). All these figures are of normal selection, such as are found again and again in Somerset, but these are unusually fine work of a good period. At the south

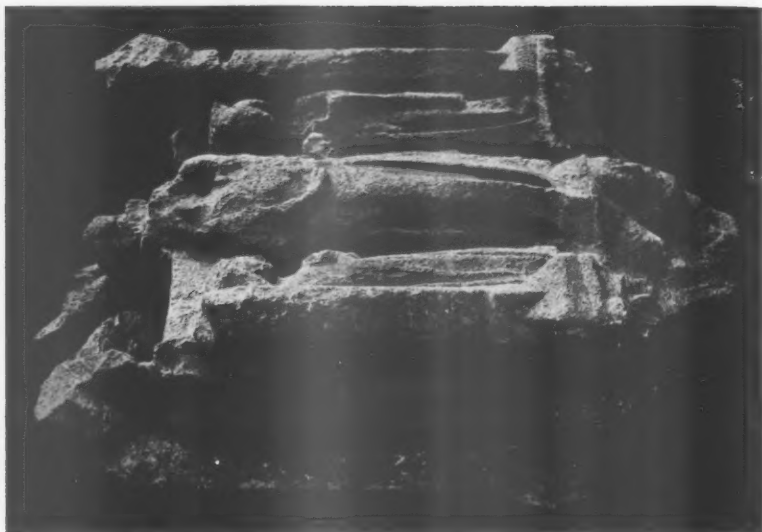


South end and east face

Berrow Cross-head



South end



North end and west face



West face

Berrow Cross-head

CROSS-HEAD FROM BERROW, SOMERSET 215

end is a figure of a bishop or abbot mitred, with right hand in blessing, and the left holding a cross on a long staff (pl. xxxix).

There are many known examples of pierced heads: this one is of a normal type, so common as to suggest some factory where such articles were produced. But this is perhaps one of the finest examples of its kind, both in design and execution. The grace and proportion of the figures are remarkable, and, considering the coarseness of the Ham Hill stone employed, they must have been most skilfully executed. The piercing of the cross-head was no doubt an expedient for lessening wind-pressure.

It is proposed to set up the cross-head and the font-bowl in the church, so that they may remain protected but untouched. The parishioners have a scheme for setting up the cross-base, which is of hard stone and in excellent order, upon the traditional Somerset form of Calvary, and erecting upon it a copy of the tabernacle, so that the interesting discovery may be perpetuated as an added point of interest to the church and churchyard. That it is a copy and of to-day will be duly recorded. I think such procedure rather than restoration is good archaeology, and will secure the approval of this Society.

The discovery in recent years in Somerset of cross-heads of this and other types is, oddly enough, by no means a rare occurrence:

Tellisford (pierced). A fine head, now in Taunton Museum, of the same date but rather smaller than that at Berrow. It has the Virgin seated and Child on reverse, St. Margaret and St. Catherine at ends.

Stoke-sub-Hamdon (pierced). Found in a garden wall. Same date and same figures as our example, but the Virgin throned only on reverse. Now in a private house.

Yeoil (pierced). Thirteenth-century example, found built in wall of charity school, now in convent garden, where it can be well seen from the road.

East Harptree (not pierced). Early thirteenth century, found in old cottage wall. In Taunton Museum.

Taunton, St. James (pierced). Found buried in churchyard. Uncouth figures of twelfth century.

Dicheat. Found in ruins of old house. Virgin only on reverse with St. Margaret and mitred ecclesiastic at ends.

Radstock. A curious example. The head was built into the south wall of the Elizabethan porch. The base-stone was recently found buried at the east end of the church. It has been set up in the church, but I have grave doubts if this head ever belonged to the base below it.

Bleadon. Base and steps were in the roadway. Head found

in east wall of church. The Virgin and Child on reverse, with two kneeling figures, one of them probably St. Joseph with a hammer in his girdle.

Ubley. Cross-roads cross. I was once cycling up the Blagdon valley and alighted to look at Ubley church. I saw a corner of carved stone in the east wall of the porch, removed a stone or two, and more carving appeared. I called on the rector and together we disclosed the remains of a cross-head, which proved to be an interesting thirteenth-century example, with Descent from Cross on one side and the Majesty on the other. It was set up in its old position by the late Sir Edward Hill, of Cardiff and Clevedon.

*Sumerians, Semites, and the Origin of Copper-working*¹

By H. FRANKFORT

M. DE MORGAN's remarkable discovery of early civilizations in the possession of painted pottery and copper at Susa in 1897 has remained for about twenty years an isolated addition to our knowledge. But the explorations of the last years have suddenly revealed its real import. In the two civilizations which he found succeeding each other at Susa there seem to be represented large cultural provinces. Their ultimate importance lies furthermore in the fact that they have both contributed elements towards the great culture of the Plain of the Two Rivers, and it seems at present possible, without allowing hypotheses to play an illegitimate part in the argument, to define with some precision the respective elements and their relation to the three great historical problems for which the title of this paper stands.

The Persian Highland Culture

The pottery has once more to guide us in our inquiry. That found in the very lowest layers of the Tell at Susa shows a decoration as much discussed as it is admired,² and we need only here recall its main features. We notice how amongst a number of geometric motives sometimes appear wonderfully stylized pictures of animals and even men; but a slavish copying of the designs without renewed reference to nature leads to a rapid degradation, and Abbé Breuil has been able to establish a number of highly interesting series showing how the natural representations become gradually geometric designs³ (fig. 1).

At Susa the tendency is already noticeable. On some sites towards the west, e. g. Tepe Khazineh, near Tepe Musyan, it is much more pronounced, and thus it seems certain that the remains from there come later than the bulk from Susa I, and technical considerations confirm that view.⁴ Those Tells seem, in fact, to be stations on the road along which this civilization descended

¹ The substance of a paper read to Section H of the British Association, Leeds, 1927.

² For literature see Frankfort, *Studies in Early Pottery of the Near East*, i, 25. Henceforth quoted as *Studies*.

³ *Comptes rendus du XIII^{me} Congrès Intern. d'Anthrop. et d'Archéol. Préhist.* Monaco, 1906.

⁴ *Studies*, i, 49-54.

into Mesopotamia; and in the still later Mesopotamian stage there is hardly any trace of natural representations left.

In Mesopotamia we find this culture represented as far north as Tell Zeidan on the lower Balikh, as Dr. Albright has shown.¹

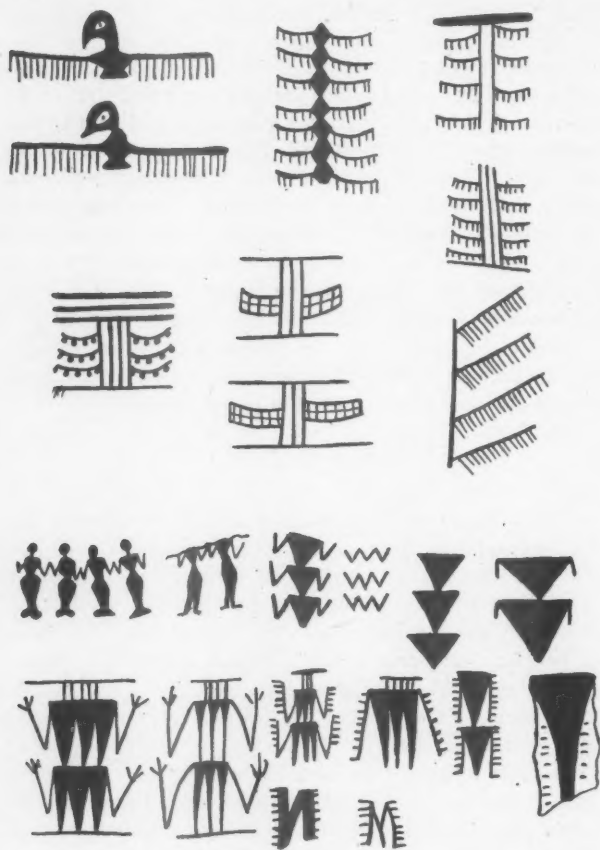


FIG. 1. Degeneration of natural representations into geometric designs (after Breuil).

It was further found by Dr. Andrae in the neighbourhood of Assur; at Samarra by Dr. Herzfeld;² and as far south as Bender

¹ *Man*, 1926, 25.

² Some doubt has been raised as to the affinity and date of this pottery, but it seems clearly to point to a stage of development intermediate between Susa I and Al 'Ubad by its technique, its shapes, and the style of its decoration alike. See

Bushire by M. Pézard. Near Kish a few stray sherds appeared,¹ and Mr. Campbell Thompson got a more considerable group at Abu Shahrein,² but the largest mass of coherent material was obtained at Al 'Ubaid by Dr. Hall and Mr. Woolley.³

In Persia, on the other hand, M. de Mecquenem has recently reported specimens of this ware from Rhagae near Teheran,⁴ while a pot from Urmya, now in Berlin (fig. 2), and others from Mohammedabad in the north,⁵ as well as Sir Aurel Stein's gleanings from Seistan, belong here.⁶ Even in Beluchistan vessels related to this style appear,⁷ while others, found near Fort Sandeman in the Zhob valley at Tell Kaudeni,⁸ may also be connected, if with less certainty. Into India we cannot as yet follow this culture. The small amount of painted pottery found in the Indus valley as yet published, is related to the apparently later painted fabric from Nāl in Beluchistan, for which there are no more westerly parallels. On the other hand, there were found at Tell Kaudeni, alongside of the painted pottery and a copper axe, lapis lazuli which points to Persia, and agate and the pottery statuette of an elephant which point to India. And it may well be that the continuation of the work of Sir John Marshall and his collaborators reveals the extension into India of the culture now under discussion.



FIG. 2. Vase from Urmya.

If we consider the finds enumerated above, it is clear that the stylistic evidence as well as the shapes and technique mark the pottery of Susa I as the earliest representative of this culture yet known to us, while the Urmya pot can hardly be much later ; in

Reallexicon der Vorgeschichte, article *Vase-Vorderasien*, § 3, e, where literature is given.

¹ These stand in no relation to the main body of remains. Just so Mr. Woolley found sherds and even a few unbroken pots in the soil in which the later people, of the First Dynasty of Ur, had buried their dead, upsetting thereby some earlier graves. The sherds from Kish are now in the Ashmolean Museum.

² *Archæologia*, lxx, 110 sqq.

³ *Ur-Excavations: Al 'Ubaid, a report on the work carried out at Al 'Ubaid for the British Museum*, etc., by H. R. Hall and C. L. Woolley. I am dealing with the pottery in a review to appear in the July number of this *Journal*.

⁴ *Revue Archéologique*, 1926, 17.

⁵ *Centenary Supplement of the Journal of the Royal Asiatic Society*, 1924, pls. xv, xvi.

⁶ *Burlington Magazine*, December 1925; *Studies*, ii, 184.

⁷ *Illustrated London News*, 20 Sept. 1924, 531, top row.

⁸ *Zeitschrift für Ethnologie*, 1898, 460 sqq.

fact the latter resembles most closely a specimen of the black-on-red ware found towards the end of Susa I.¹ Thus the early stage is well represented in the Persian Highlands. Furthermore, this style seems to have long persisted there. In the first place this is suggested by the finds from Seistan, where, amongst a group of sherds of the first style, with exclusively geometric ornaments, appear two which are exceptional in their technique and are considered by Mr. Andrews to be foreign imports; and in fact their animal representations belong to the monochrome style of Susa II, and they are therefore in all probability imported from that city. It would then follow that in the Persian Highlands the first civilization still persisted though displaced at Susa by the second. The pottery from Anau, though not belonging to the Persian culture, may also be adduced in this connexion; for now that Susa I appears to be a representative of a large cultural province which includes all Persia, the isolation of the pottery from Anau, which I advocated in 1924,² need no longer so rigidly be maintained. Already in the first settlement, and more clearly in the second, there appears red ware with matt black paint, applied after the polishing. In the second settlement there appears also plain red-polished ware which is identical with the common Anatolian fabric. In Anatolia, however, pot-painting is not known before the last centuries of the third millennium; and thus it is tempting to explain the painting at Anau as due to influence from the Persian culture. Now the third settlement at Anau is somewhat more closely related to the Persian culture,³ as well as the pottery from the neighbouring Mohammedabad. But if Anau can thus reflect influence from the Persian culture in its second and third, and perhaps in its first, settlement, that Persian culture must have apparently existed for a considerable period.

In Mesopotamia nothing similar is found. With the exception of Samarra we have there no early instances of the style, nor is there anywhere proof of a development during a considerable lapse of time or through various stages. Thus one may tentatively consider the civilization, of which Susa I is the best-known representative, as characteristic of the Persian Highlands, whence it would have descended to the Plain, and when it was displaced there it seems still to have flourished in the east and north.

The so-called second style at Susa, as well as the first, appears to be no mere local growth on the Kerkhah. At the same time recent discoveries tend to emphasize a distinction, already made in 1924, between a polychrome and a monochrome variety.⁴ The

¹ *Studies*, i, pl. III, 4.

² *Ibid.*, 78.

³ *Ibid.*, 83 sqq.

⁴ *Ibid.*, 66 sqq.

polychrome class is not found farther to the east than Susa II, where it occurs in a few specimens. At Tepe Musyan and the neighbouring Tepe Aly Abad it occurred in great quantities, and also at Jemdet Nasr near Kish and at Assur, while one single example occurs at Al 'Ubaid.¹ The monochrome painted pottery is represented in Mesopotamia by various vessels from Jemdet Nasr and by one single pot at Telloh, by common consent an importation from Susa II.² At Susa II it is common, and it is recently reported by M. de Mecquenem³ and by Dr. Herzfeld⁴ from NW. Persia. Some of these vessels, from Nihawad, have recently been obtained for the British Museum and will soon be published in the 'Quarterly'. Two of them (118740, 118742) have the same shape as the pot published by Herzfeld, a shape which is, like that of some small pots in the group, typical for the second style at Susa; and their designs, e.g. the eagle with spread wings and the summarily sketched birds, are found also in Susa II.⁵ Some other vessels in the British Museum, however, found apparently at the same site, but, of course, not necessarily of the same date, stand quite apart; they have much more differentiated forms than those used in Susa II, e.g. real feet and handles. The designs show a framework of rectilinear patterns of too simple a nature to guide us; amongst these are strewn rather irregularly small nondescript birds and rosettes. M. de Mecquenem has already published two of these vases,⁶ the affinities of which are as yet not clear.

When this monochrome ware was only known from Susa it seemed that it was simply a later stage of the polychrome variety. This was suggested by the stratigraphy as well as by the objects with which the two varieties were found;⁷ and it can indeed not be denied that the polychrome seems to precede the monochrome ware at Susa II, while certain vessels, like the large monochrome store-jars, are obviously degraded descendants of the polychrome ones of the same shape. Among the small pots we find those with sharp-edged rim and shoulder, typical of the polychrome ware, also represented among the monochrome variety;

¹ Al 'Ubaid, 155 and pl. LI, p. xv b (T.O. 521). See now also Langdon, *Ausgrabungen in Babylonien seit 1918* (*Der Alte Orient*, 1928) especially p. 74. Unfortunately Professor Langdon, all through this booklet, treats the pottery without discrimination.

² Cros-Heuzey, *Les Nouvelles Fouilles de Telloh*, 310, fig. 20.

³ *Revue Archéologique*, 1926, 17.

⁴ *The Illustrated London News*, Nov. 17, 1927.

⁵ For shapes see *Corpus Vasorum Antiquorum*, France, Fasc. 2, pl. v, 1-3; for designs *ibid.*, pl. vi, 44, iv, etc.

⁶ *Revue Archéol.*, 1926, 17, figs. 3, 4.

⁷ *Studies*, i, 66 sqq.

while the rounded forms of the monochrome bottles, not represented in the polychrome class, are quite naturally explained as a further stage of ceramic technique in which the different parts of a vessel are no longer separately made on the wheel and then joined, but where the whole vessel is 'thrown' in one piece.

But if the evidence from Susa alone can be satisfactorily explained in this way, it cannot account for the difference in the distribution of the two varieties. For the polychrome style does not seem to have penetrated into Persia, whence the monochrome ware is now reported. On the other hand, we have found that there is a great probability that the Highland culture, with its equally monochrome pottery, persisted long in Persia proper. At Susa itself, where we only know the first style in an early form, and where, moreover, a sterile layer intervenes, no connexion between the first and second civilization exists, as we have shown elsewhere.¹ But did such a connexion exist more towards the east in the Persian Highlands? If this question should be answered in the affirmative it would prove that we have without justification read into the low-grade natural representations of the monochrome variety of the second style at Susa the manifestation of a naturalistic mentality which as such would be too different from that of the makers of the first style for the first-named variety to be ascribed to descendants of the latter. Then also the similarities in the contents of the decoration of the two styles, on which M. Pottier has so strongly insisted,² would gain importance. At present the matter must be left in abeyance until specimens of the monochrome variety from North and Central Persia are found in regular excavations. We shall then be able to judge of what

¹ See also Addendum, p. 234.

² *Revue Archéologique*, 1926, *Une théorie nouvelle sur les vases de Suse*. This criticism of some views expressed in *Studies*, i, does not, to my mind, do away with the main results of that inquiry. But I am not prepared to dogmatize about the origin of the Susa I pottery in leather vessels though that seems still probable to me. I have not, however, based that suggestion on a misinterpretation of certain vessels which got deformed in the firing (*Rev. Arch.*, loc. cit., 6, fig. 1) to which M. Pottier takes me to refer when speaking about the 'bulgy outlines' of the vessels. Even such beakers as that figured in *Studies*, i, pl. 1, 1, have, especially near the foot, that peculiar roundness which reminds one of leather. This, however, is a minor point, as is also my tentative sketch of the economic conditions under which the inhabitants of Susa I lived. I confess that here, as on a number of points, I have expressed myself somewhat too vigorously, not to say dogmatically (see *Studies*, ii, p. iv, foot-note). In the matter of the survival of religious motives from Susa I into Susa II, M. Pottier quotes again the eagle with outstretched wings, but does not take into account a seal-cylinder which proves that we have no right to take the bird on the Susa I pots (which never grasps animals, as do the heraldic birds from Sumer and Susa II) as an eagle (*Studies*, i, 46, n. 4).

the eventual links with the earlier Highland culture consist, and also to what extent similarities exist with the pottery from Susa II, where the features which form a contrast with that from Susa I may be explained, even in the monochrome ware, as due to the influence of the makers of the naturalistic polychrome pottery which precedes the monochrome variety at Susa II. Are these contrasts with the older style absent in Persia? How far did the foreign or the mixed culture on the fringe of the Highlands influence the interior? All this remains to be investigated. If it should appear that the rigid separation between the homologues of Susa I and II respectively, which we have advocated, could not be maintained in the light of the new material from Persia (as M. de Mecquenem implies), then it would be incorrect to speak of monochrome and polychrome *varieties* of a presumed 'second style', but we should have to distinguish, on the one hand, a later Highland culture with monochrome painted pottery, and, on the other, the outposts, in the foothills of Susiana, of a Lowland culture with polychrome pottery, which we shall now proceed to consider.

The Lowland Culture

At Susa the polychrome pottery is later than the Highland culture of Susa I; the one is actually found above the other in the mound. In Mesopotamia the descendants of the Highland culture appear with a wealth of stone implements and without any trace of script, and the polychrome ware appears together with the most archaic Sumerian tablets at Jemdet Nasr.

Thus it seems certain also that the Highland culture in Mesopotamia precedes the culture with polychrome pottery; the latter in its turn accompanies the earliest stage which we know of the Sumerian culture. We knew this already from Assur, where polychrome pottery was found antedating the earliest Sumerian layers H and G (fig. 3). But clearer evidence comes now from Jemdet Nasr. There a particularly rich set of polychrome vessels was found together with cuneiform tablets, which were, as Mr. Gadd has established,¹ older than the first dynasty of Ur or the tablets from Fara.

We have spoken for brevity's sake of a polychrome pottery. But it should be clearly realized that the use of one or two colours is not the sole criterion upon which we should like to base a division of pot-fabrics. In the present case we find at Assur, Jemdet Nasr, Tepe Aly Abad, Tepe Musyan, and Susa II a pottery which has quite a number of specialized features in its decoration, and its

¹ *Al 'Ubaid*, 128 sqq.

shapes in common, and moreover appears in an archaeological context which is in all cases characterized by other elements (e. g. cylinder-seals and theriomorph or multiple vases) of identical type. And these phenomena are not even confined to Mesopotamia alone.

In the first place it is remarkable that at various times, in various regions of the Near East, there appears pottery very closely akin



FIG. 3. Vase from Assur (after Andrae).

to this polychrome Mesopotamian ware. These various fabrics all show (1) natural representations rendered in a naturalistic (as opposed to an abstract-decorative) way, with animals drawn either in full silhouette or with hatched bodies; (2) the designs grouped in panels (metope-style); (3) the use of red alongside black in various simple schemes of alternation, which are in many cases identical in the different instances. These wares appear in Palestine in the middle of the third millennium, and in Cyprus, Egypt, and Cappadocia in the Hyksos period. In Mesopotamia, as we shall see, it appears already before 3000 B.C., but we cannot consider Mesopotamia as the centre from which it spread later on, because it had already died out there before the time of the first dynasty of Ur, that is to say, several centuries before its appearance

in Palestine. The polychrome painted pottery, which thus appears suddenly, and without connexion with what precedes it, in Mesopotamia, Palestine, Cyprus, Egypt, and Cappadocia at various times, may reasonably be supposed to be at home in a region centrally situated between these countries, where it persisted all along. North Syria suggests itself, therefore, as the only possible place of origin for the civilization with the peculiar pottery under discussion. In this connexion it is interesting to note that at the one North Syrian site where early layers were touched, Sakjegeuzi, the small trial trench produced *inter alia* polychrome pottery, in contrast with the earliest layers in all other regions of the Near East; while Mr. Woolley, who excavated the other North Syrian site, Carchemish, confirms the resemblance between one example of polychrome pottery from Mesopotamia and some from the early layers of his site, where 'the three-colour scheme predominates'.¹ Thus there is a strong case for our assumption, more fully put forward elsewhere, that the polychrome pottery culture of Susa II *a* and Mesopotamia, which appears there without connexion with its local predecessor, is of North Syrian origin.

Sumerians and Semites

The interrelations of the three civilizations which existed in early times in Mesopotamia must now be considered. It is clear that there is continuity between the period in which polychrome pottery is used and the fully grown Sumerian culture of about 3000 B.C., when pot-painting had fallen into disuse. The cuneiform tablets from Jemdet Nasr are there to prove it. Additional evidence comes from the tessellated pillars of A-annipadda's temple at Al 'Ubaid, which are also found, with polychrome pottery, at Tepe Aly Abad; the shapes with sharp-edged rim and shoulder, typical for the latter, are also found in the unpainted early Sumerian wares at Assur and Al 'Ubaid. The big store jars have sometimes a plastic ornamentation on the shoulder, in which groups of three vertical ridges connect a horizontal one round the shoulder with another round the base of the neck (this occurs at Musyan and at Jemdet Nasr); or they possess strange triangular excrescences on the shoulder, e.g. at Musyan and at Al 'Ubaid. Finally the remarkable offering-stands and incense-burners occur at Musyan, Assur, Fara, Kish, and Ur. Thus we may not only assert that the polychrome pottery in Mesopotamia overlaps the earliest known stage of Sumerian culture, but also that there is exemplified a certain amount of

¹ *Al 'Ubaid*, 168.

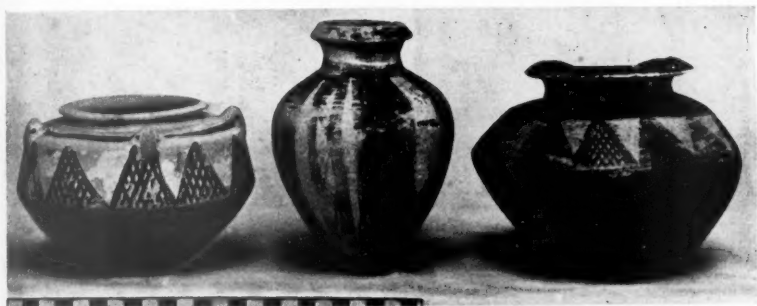
continuity between the polychrome pottery and that of the Sumerians of the time of the first dynasty of Ur and earlier.¹

It is not at all clear, however, whether there existed continuity between the Persian Highland culture and the Sumerians. At Susa, as we have shown *in extenso*, there is a complete break, which becomes manifest from the existence of a sterile layer of varying thickness which separates the two civilizations.² But at Susa we only know the Persian Highland culture in an early stage of its development, and we have seen above that evidence seems to be accumulating pointing to its prolonged existence elsewhere, and thus it can by no means be asserted *a priori* that the discontinuity between the Persian Highland culture and the Sumerian culture was complete. From Jemdet Nasr come a few monochrome vessels, now in the Ashmolean Museum at Oxford, which are important in this connexion (pl. xli, 1). It is hard to say whether they are monochrome descendants, such as we know from Susa II, of the polychrome pottery, or whether they belong to a late stage of the Persian Highland culture. The shape of the lugs, paralleled by some polychrome stone-jars, and their position high up on the shoulder, seems to connect them rather with the later culture. But if continuity between the Persian Highland culture and the Sumerian culture is not yet proved, it is no doubt theoretically a possibility, to which we shall presently return. It seems wiser, however, first to consider the position of the polychrome pottery, as so much more is known about it. We have seen that, as far as shape is concerned, it merges into the Sumerian pottery, and that it is found together with very archaic Sumerian remains; but on the other hand we were led to presume for it North Syrian affinities. Furthermore, it is very remarkable that it seems to be extremely rare in the south of the Plain of the Two Rivers, in Sumer proper in fact, while it seems well represented in Akkad. These circumstances taken in conjunction tempt us to be somewhat more definite about the makers of the polychrome pottery and to identify them with an element which seems from the beginning to have been present in the Sumerian culture, though it was more predominant in Akkad than in Sumer. That element is Semitic.

The Semites present one of the most complicated problems in the Near East, and the view which simply refers to an overflow of

¹ See now also *Reallexicon der Vorgeschichte*, article *Vase-Vorderasien*.

² *Studet*, i, 34 *sqq.*, and now *Revue Archéol.*, 1926, 14 *sqq.* It is of little importance that the sterile layer appears to be of varying thickness. The new *sondages* have shown that the two cultures nowhere mix and that the separating sterile layer seems to exist throughout the site.



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Pottery from Jemdet Nasr, by the courtesy of Professor S. H. Langdon

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Bedawi from Arabia, as soon as Semitic features appear anywhere, is very often beside the mark. The subject is dealt with in Dr. S. A. Cook's admirable chapter in the first volume of the *Cambridge Ancient History*. In our case it is clear that no infiltration or invasion of Semites from Arabia could account for the peculiarities of material culture now under discussion. It may well be that direct immigration from Arabia has taken place; but that need not imply that there did not exist another source for Semitic features in Mesopotamia as well. Von Luschan has shown¹ that it is in North Syria of all places that one can observe how Semitic waves have affected the country to such an extent that the population was more or less strongly Semitized, either in language or religion or both. On the other hand, the physical type of these (Armenoid) populations was hardly ever changed. Thus Professor Elliot Smith speaks definitely of 'Armenoid Semites' in Syria in the time of the first Egyptian dynasty.² Even if one doubts whether the Egyptian ivories which he discusses are sufficiently free from the preoccupation of mere technique to be trustworthy evidence of racial type, one has the roughly contemporaneous statuettes in the round from Assur which show a brachycephalic man with a 'Hittite' pigtail.³ As far as our sources reach back, North Syria seems to have been a region where races and cultures mixed. That its civilization may have possessed a number of peculiar features of its own need not, however, therefore be denied; and only excavation will enable us to see more clearly in these matters. At present we seem to have good reason to infer that in that more or less Semitic centre a particular kind of polychrome pottery of the type discussed above was used throughout, so that it appeared in surrounding regions whenever movements of peoples compelled groups of the North Syrians to move abroad. Thus this pottery appears in Egypt with the Hyksos, many of whom (but not all) bear Semitic names. In Palestine it appears earlier, about the middle of the third millennium; and some remarkable Egyptian texts recently published by Professor Sethe,⁴ show that just in this period a change must have occurred amongst Egypt's Asiatic neighbours, after which, though the place-names in Palestine remain non-Semitic, the names of the chieftains are often Semitic; and the Egyptians in the early Middle Kingdom refer to the Palestinians henceforth (in contrast with Old Kingdom usage) by

¹ Especially in *Rassen, Völker, Sprachen*.

² *The Ancient Egyptians*, pp. 99 sq.

³ Andrae, *Die Archaischen Ischiarientempel*, pls. 43, 47 c-f.

⁴ *Die Achtung feindlicher Fürsten, Völker und Dinge auf altägyptischen Tongefässscherben des Mittleren Reichs*, in *Abhandlungen der Preussischen Akademie der Wissenschaften*, 1926.

a term used for the Semitic Asiatics. This bears out fully our conclusions as to the makers of the polychrome pottery.

Now we know that in Mesopotamia the Semitic predominance under Hammurabi's dynasty was not due to a previous direct invasion from Arabia, but to civilized western Semites from North Syria. A similar movement may therefore be surmised for the second half of the fourth millennium. The earliest representations of gods on Sumerian monuments already wear, as Eduard Meyer has shown, the western Semitic beard without moustache. This is strikingly the case on the very archaic inlaid plaques from Kish,¹ near which place, at Jemdet Nasr, the polychrome pottery was found in such abundance. Now as to the features which appear with the polychrome pottery, Dr. Contenau sees in the cylinder-seal the hall-mark of the Semites;² and the cylinder-seal appears for the first time in Mesopotamia and Susiana with the polychrome pottery, while earlier the stamp-seal (of probably Anatolian-Caucasian affinities) was used. The evidence of the theriomorph and multiple vases is less conclusive,³ but a double vase of this type seems to have provided the writing-sign for the Semitic part of Mesopotamia, viz. Akkad.⁴ Thus it seems not too rash to ascribe the polychrome pottery and the cylinder seals, and perhaps the theriomorph and multiple vases of alabaster, to Semites or at least Semitized North Syrians.

The other component of the dualistic fabric of Mesopotamian civilization, the Sumerian, is with somewhat less evidence to be made responsible for another group of early material remains. We have seen that there is not yet established any continuity between the earliest painted pottery and the Sumerian civilization, though such a continuity may well have existed. This is shown by analogy with Egypt, where without traceable change in the population a pre-historic civilization with painted pottery develops into the Pharaonic civilization, where pot-painting is no longer practised. Thus we are tempted to identify the Sumerians or their relatives with the makers of the homologues of the Susa I pottery; we should then have to assume that they extended originally well up to the north, as that painted ware is found as far as Tell Zeidan in the Balikh valley. Next Semites with their polychrome ware would have advanced from the north and mixed with the Sumerian population, without however becoming prevalent in the extreme south, in what

¹ Langdon, *Excavations at Kish*, i (1924), pls. xxxvi-xxxix.

² *La Glyptique Syro-Hittite*, 60 sqq.

³ *Studies*, i, 111; Glanville, in *Journal of Egyptian Archaeology*, xii, 53 sqq.; *Studies*, ii, 103, note.

⁴ *Studies*, i, 65, n. 5.

was known in historic times as Sumer proper. There their pottery seems to be of great rarity.

It is doubtful whether the two strains in the Mesopotamian civilization are traceable by actual human remains. Physical anthropologists grow more and more sceptical about conclusions based on such relatively small material as we possess as yet from Mesopotamia. Perhaps certain differences already observed are relevant to our problem.¹ Furthermore, Sir Arthur Keith states, as a result of his examination of the Al 'Ubaid skulls, that these ancient Sumerians were very similar to the modern inhabitants of the country, and, like the latter, represent a transition between the 'Iranian and Semitic type, but they have retained more of the Iranian than of the Semite'.² This conclusion would well bear out our own. But of course one has to be careful in styling the makers of the painted pottery of the Highland culture as a whole 'Sumerians', for the latter may have been a highly specialized branch amongst a series of related peoples, and such a generalization might be as mistaken as it would be to call all the Hamitic peoples of North Africa 'Egyptians'. The pottery shows certainly that some homogeneity of culture existed at one time from the Balikh in the west down to Beluchistan, and if these wares were found in India, where other similarities with Sumerian culture seem to appear, the relation between the Sumerians and the Highland culture might become clearer, and new light might be thrown on that remarkable hoard of gold vessels found at Astrabad and recognized as Sumerian products by Professor Rostovtzeff.³ At present we must be satisfied with having realized that both civilizations originally found at Susa appear to represent there vast cultural provinces; and that it is probable that the younger may be ascribed to North Syrian Semites, and possible that the older is due to Sumerians or their kinsmen.

The Origin of Copper-working

If, however, the makers of the oldest painted pottery in Susa and Mesopotamia, i. e. the people of the Highland culture, were Sumerians, then it is to those pioneers of civilization that we must attribute the momentous invention of copper-working, or at

¹ In the discussion Mr. L. H. Dudley Buxton stated that the skeletal material from Kish suggested that in addition to the racial elements which are common both to Kish and to Ur there are others which so far have not been found at Ur. If further research confirms these facts, it would appear that the distribution of the two classes of painted pottery in Mesopotamia coincides with that of two different racial elements, which then could be hardly anything but Sumerians and 'Semites'.

² *Al 'Ubaid*, 214 sqq.

³ *Journal of Egyptian Archaeology*, vi, 4 sqq.; *Studies*, i, 85.

least its application to practical use on a scale which made it a revolutionary innovation. We have discussed elsewhere in detail that the few isolated instances of worked copper found in Egypt before the Late Predynastic Period, i. e. before Sumerian influence is noticeable, are of as little consequence as the sporadic use of iron in the same period at Gerzeh.¹ In fact these rare occurrences of copper add only relief to the sudden increase of copper implements after contact with Asia is established and proved by a mass of independent evidence. Relative dating establishes, moreover, that Susa I is older than the period in Egypt in which the Asiatic influences become manifest,² and Susa I already uses copper copiously. We have also shown that in Europe copper appears earliest where intercourse with Asia is easy, and then assumes shapes which point, again, to Asia; and the Aegean copper appeared, originally, to be equally dependent on Western Asia, or more precisely Anatolia and its dominion Cyprus. The forms common to Europe and Asia are found in great quantities in the Caucasus region, whence they seem to have spread via Troy towards the west (cf. figs. 4 and 5). In fact classical tradition is unanimous in extolling the excellence of Armenian metallurgy. The methods in which excavations have been carried out in those regions make it impossible to determine the chronological position of the Armenian-Caucasian remains, but indirect evidence shows that the industry must already have existed about 2000 B.C. because its products, eyelet-pins and torques, reach Egypt occasionally via Byblos in the Middle Kingdom.³

Now the recent discoveries in Mesopotamia have suddenly revealed that a large number of these common Caucasian types existed already in the last century of the fourth millennium in Sumer. Thus it appears that the extraordinary early Sumerian copper industry, which has been a source of astonishment ever since Dr. Hall recovered at Al 'Ubaid the Imgig-relief and the temple lion and bulls, stands in the closest possible relation to the industry of the Caucasus region. Most striking are the four spatula-shaped pins (*Schaufel-nadel*; *épingle à raquette*), two of silver with turned-over top, and two of bronze, which were exhibited

¹ *Studies*, ii, 4 sqq., 33 sq., 119 sqq., 147 sqq., 189 sq. Mr. Lucas has recently (*Journal of Egyptian Archaeology*, xiii, 162 sq.) shown how favourable were the conditions in Egypt for the discovery of copper-working. But history is no matter of logic, and comparative archaeology plainly proves that the opportunity was not grasped, and that the use of copper on a considerable scale was due to Asiatic initiative.

² *Studies*, ii, and now also *Comptes Rendus de la Session d'Amsterdam de l'Institut International d'Anthropologie*, 1928.

³ *Studies*, ii, 148.

in the British Museum last year amongst Mr. Woolley's finds from Ur. These have always been regarded as the most characteristic product of the Caucasian metal-industry (fig. 4, 4), reaching Europe via the great emporium at the Hellespont (fig. 5, 3). A form like this

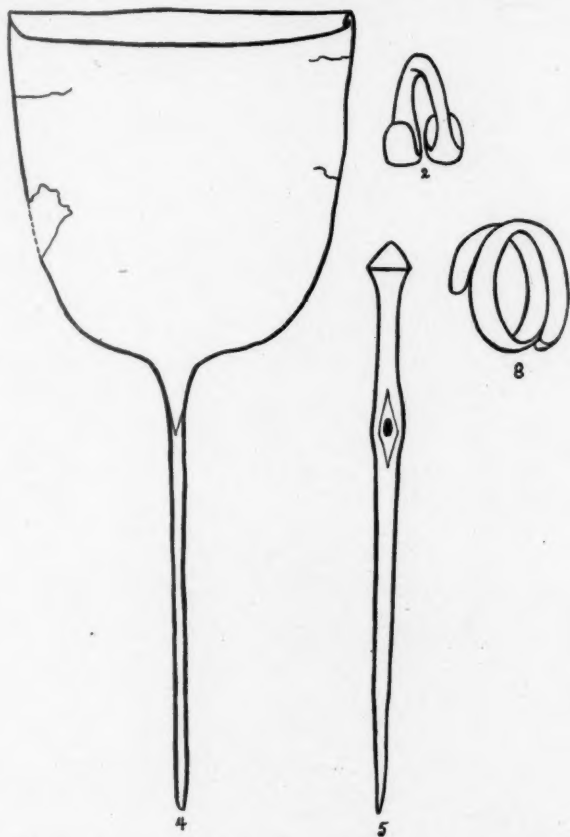


FIG. 4. Ear pendants and pins from the Caucasus (after Chantre).

is so exceptional and arbitrary that its occurrences in different regions cannot reasonably be explained as due to independent development. Moreover, there is a number of other objects which now appear to be common to Sumer and the Caucasus region and its dependants. There were found at Ur and at Kish the simpler pins flattened at the middle or at the top (fig. 6), obviously related to the spatula shape, and also paralleled from the Caucasus. The

same applies to the eyelet-pins, and the spiraliform ear-pendants, which have such a rich development in Troy and Central Europe (figs. 4 and 6), but are of Asiatic origin, as I have shown elsewhere. Then were found at Ur the three-toothed prongs, known from Astrabad and Tsarewskaja. But we need not confine ourselves

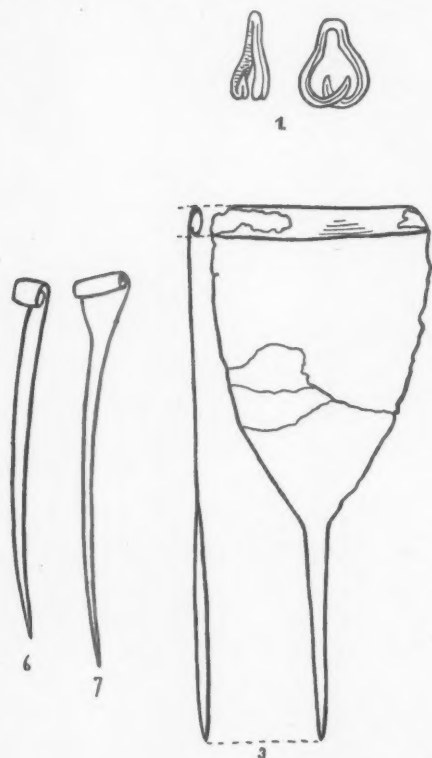


FIG. 5. Ear-pendants and pins from Bohemia (after Ebert, *Reallexicon*, ii).

to objects of copper alone. The jewellery from Ur contains striking features which are paralleled in the Caucasus region on the one hand, and in the West, notably in the Aegean, on the other. The diadems of gold-foil with engraved designs and the gold-foil pendants in the shape of petals¹ are remarkably like those found in the earliest metal age in the Aegean, at Mochlos and Platanos in Crete, and in Amorgos. On the other hand, they are paralleled

¹ *Illustrated London News*, 23rd April 1927.

at Maikop just north of the Caucasus. Gold beads of a remarkable type have exactly the same distribution—they occur at Ur, Crete, and Maikop.¹ It is also relevant to recall here the 'Sumerian' treasure of Astrabad. All this evidence suggests quite clearly that well before 3000 B.C. there already existed an important centre of metallurgy somewhere south of the Caucasus, with which the Sumerians were in close touch. Moreover, when we are entitled to style the bearers of the Highland culture Sumerians, we can attribute the invention to them, for, as we

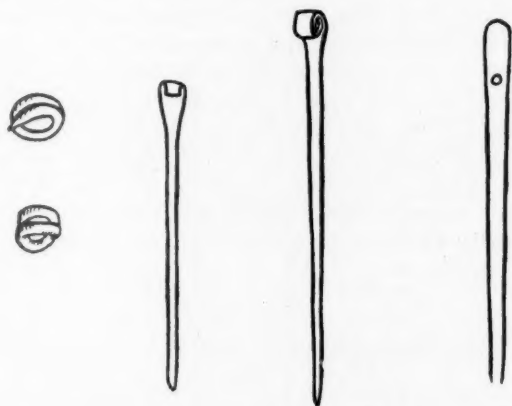


FIG. 6. Ear-pendants and pins from Kish (after Mackay).

have seen, the Highland culture seems to have extended all through the region south of the Caucasus and Caspian. Where exactly the discovery was made cannot be decided as yet.² That intercourse within this region already existed at a very early period is shown by the appearance at Susa, towards the end of the first (i.e. the Highland) civilization, of certain red pottery and of stamp-seals, known from Anatolia, and moreover recently

¹ Compare Childe, *Dawn of European Civilization*, fig. 61, with Xanthoudides, *Vaulted Tombs of Mesara*, pl. LVII, top row.

² In the discussion Professor Childe rightly insisted on the necessity of distinguishing between the creative region, where discoveries were made and shapes evolved, and the mining region. We cannot as yet be certain about the exact location of the first; it should be remembered, however, that the first movement from Asia into the Aegean which brings copper, starts from the south coast of Asia Minor (*Studies*, ii, 79). And, further, the wealth of Hissarlik II and the distribution of copper and early bronze types in Europe suggest that the Caucasus region or at least some region on the eastern or southern littoral of the Black Sea was exporting metal objects of these various forms, and not metal only.

published as found actually in the Caucasus region.¹ Anyhow, wherever the invention was made, there is no doubt that it spread towards the west via Asia Minor and that the subsequent movements of peoples mark the earliest period which historical archaeology can reach.

Some sherds recently found in China might suggest that the knowledge of copper-working perhaps also spread to the east from the Persian-Caucasian province. The beautiful painted pottery with its spiral designs found in neolithic layers by Dr. Andersson seems to be a local growth, but a few painted sherds found with copper at Sha Ching differ from the neolithic ware. As far as one can judge from descriptions and plates, they are very like pottery from Susa I and from Urmya with their designs of birds and triangles; and very like the Urmya pot and sherds from Tepe Mohammed Djaffar near Musyan in technique. These are no doubt significant indications; but our material is as yet too scanty, and though it may be useful to map out, as it were, the tracks which future research might fruitfully explore, it is only future research itself which will allow us to decide whether these tracks lead anywhere at all.

Addendum

Recently Mr. Woolley has suggested (*Journal Royal Asiatic Society*, Jan. 1928, 35 *sqq.*) that Susa I and II are contemporaneous. The stylistic contrasts between the two types are explained by stressing my suggestion that the pottery of Susa I might be funerary to such a point that ritualistic tradition alone is made responsible for the divergencies.

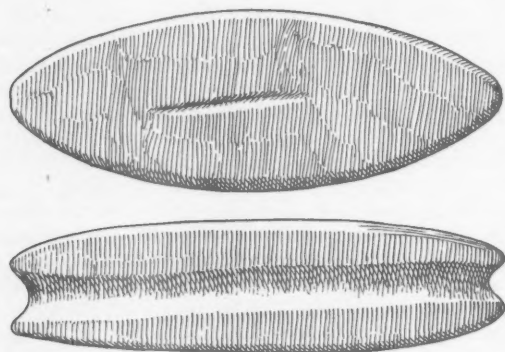
The rest of the argument is, unfortunately, based on a very careless use of various publications. Nowhere is advocated the impossible 'time-series: Susa I—Musyan-Susa II' with which I am credited (pp. 49 *sqq.*). On the contrary, it was laboriously shown that the 'poterie épaisse' and the 'poterie fine' from Musyan were both representatives of a later stage of the same culture which we know in an earlier stage at Susa I, and which is therefore earlier than Susa II (see *Studies*, i, 49–53; and especially 77 *sqq.*). Mr. Woolley does not seem to be aware of the fact that M. Pottier has whole-heartedly endorsed that view (*Revue Archéol.*, 1926, 26 *sqq.*), so that it is now incorrect to state 'that as soon as we get, at Musyan, wares which diverge slightly from the established Susa types the authorities cannot agree to which of the Susa periods they ought to be assigned' (p. 47). Moreover, Mr. Woolley is no longer entitled to quote the French scholar as maintaining that pottery from Susa I and II was at Musyan found together (p. 47), for that contention was based on M. Pottier's original misconception as to the nature of 'poterie épaisse' (*Studies*, i, 49, n. 3), which he no longer holds.

¹ *Studies*, i, 38, and *Liverpool Annals*, xiv, 54 *sq.*

Lastly Mr. Woolley finds some external evidence for his hypothesis in the '*Coupe théorique du Tell*' of M. de Morgan. In handling that drawing, however, Mr. Woolley forgets the rule that a scientific diagram should never be used as evidence outside the scope of the particular point which it was meant to illustrate. M. de Morgan warns us explicitly that he does not give an exact section from one of his excavations on the site, but merely a diagrammatical synthesis to show the division of the colossal deposit of debris over the various layers, such as his work in a number of trenches, and other *sondages*, had revealed. But Mr. Woolley treats this sketch as if it was meant to show all sorts of details; he actually measures it and concludes from it that the grave-deposit 'retains a horizontal surface flush with the wall-top for a distance of not less than seven and a half metres from the wall-face, etc.' (p. 43). He then proceeds to argue that 'houses are built on the level of the ground and graves are dug down into it. Identity of level is in itself enough to disprove identity of date.' Consequently the graves with the fine pottery cannot be contemporary with the settlement. But the premise is wrong: the houses are definitely known to have stood on natural hillocks, and the same can with certainty be presumed for the graves, as they had to be safeguarded against the floods of the Kerkhah, which flowed past the site. Now there is nothing in M. de Morgan's drawing to show the relative height of these hillocks. The '*collines naturelles*' are merely indicated by one continuous horizontal line, a clear warning not to take the drawing too literally, even if one should overlook M. de Morgan's explicit statement that his sketch is '*théorique*' and '*approximative*'; but M. de Morgan was an admirable draughtsman, known also in other cases (e.g. predynastic Egyptian vases) to have sacrificed sometimes exactness to elegance, and thus he has neatly sketched here a number of graves outside the wall of the settlement, on a much too large scale, and with no other intention than to show that they were numerous there and found in more than one layer. That is all, and there is thus no question of 'archaeological grounds' which would make the later date of the graves 'indisputable'; for these 'grounds' do not consist in newly reported facts or in observations on the site itself, but merely in a far too rigorous interpretation of a constructive and thus imaginative diagram. Two years ago, however, there were published further stratigraphical observations which M. de Mecquenem made at the request of M. Pottier (*Revue Archéol.*, 1926, 13 sqq.). These Mr. Woolley does not seem to know, but they are, though not yet final, interesting. While it is confirmed that a sterile layer separates the two successive civilizations over the whole of the site, it appears also that the thickness of the layer varies and that altogether the stratification is very irregular and only tallies in its most general characteristics with the old diagram. Whether the sterile layer was caused by desertion of the site or by levelling will be known when the architectural remains are published.

Notes

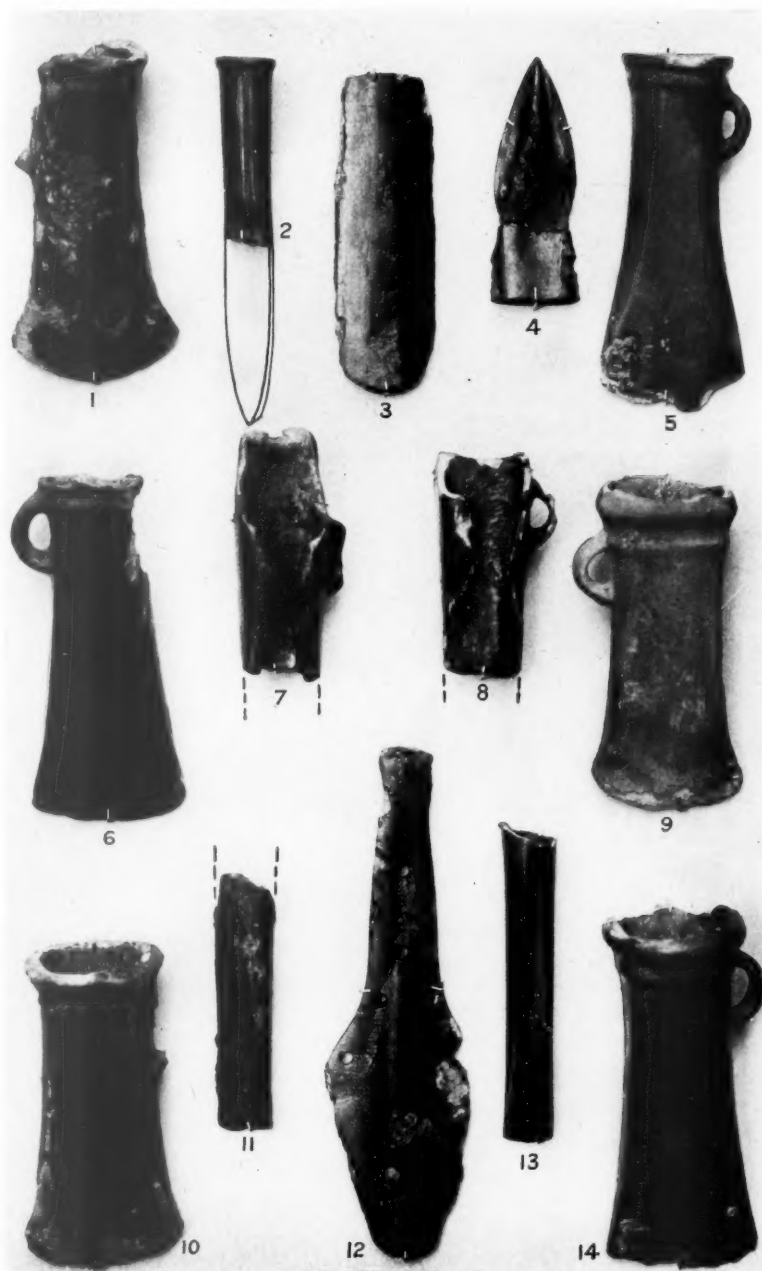
Scandinavian strike-a-light.—The first discovery of a pointed oval 'tracked' stone from Scandinavia in this country was recorded in this *Journal*, vol. iii, p. 371 (near Northampton: Leicester Museum), and a second is now reported from Norfolk by Mr. J. Walter Jones. It was found within half a mile of Sandringham House and three miles from the Wash by Mr. R. Howlett, who has presented it to the British



Scandinavian strike-a-light (3).

Museum. The material is as usual quartzite, the length 4.4 in. with a broad channel cut all round to secure it in the belt, and a groove on both faces due to use in striking fire with a steel. Many have been found in Norway and Sweden, and the type has been discussed by K. Rygh in *Opuscula Oscari Montelio dicata*, where specimens still attached to the belt are illustrated (pp. 329-32). Such discoveries have settled the problem of their use, and the date now generally accepted is A. D. 300-500, that is the Migration Period when Britain was first exposed to invasion from Scandinavia; but it is more likely to have been brought over in the fifth century than during the Roman occupation of Britain, as the forts of the Saxon Shore and the signal-stations farther north were in working order till about A. D. 380.

Bronze hoard from Suffolk.—A selection is illustrated (pl. XLII) from a hoard of scrap-metal found in August 1926 at Somerleyton, Suffolk, and recently acquired for the British Museum through the Rev. Gerald Halsey, rector of the parish. Like most hoards in Britain, it dates from the late Bronze Age, and once more socketed celts are associated with fragments of the continental winged type (nos. 7, 8). The former are of various patterns: four with ribbed faces (nos. 10, 14), two faceted (no. 5), and six plain, besides fragments (nos. 1, 9), including two with square mouths (no. 6); all the celts apparently being of the looped



Bronze hoard from Suffolk ($\frac{1}{2}$)



Bernard Griffin, Dorchester, photo.

Roman pavement, Dorchester

variety. Imperfect items are two socketed gouges (nos. 11, 13) and a chisel (no. 2); also a crushed lance-head with peg-holes, cast hollow to the point, the original length being 2·8 in. There are eight fragments of sword blades (no. 3) with convex faces and bevelled edges, as well as a single handle (no. 12) with six rivet-holes, and the outline of the hilt visible at the base of the blade. The edges are too decayed to show any lateral notches (*ricasso*), but the type should be earlier than the Hallstatt Period. In one of the celts (no. 9) was found a small piece of cloth wedged in with two lumps of bronze; and this is declared on examination to be linen fabric. The number of hoards found in Britain is steadily growing, and there are many additions to make to Mr. Rice Holmes's list in *Ancient Britain*, p. 150, note 1, which is itself a supplement to the list in Evans's *Bronze Implements*, p. 464.

Roman pavement from Dorchester, Dorset.—Captain J. E. Acland, F.S.A., sends the following note:—The Dorset County Museum is probably unique in that nearly the whole floor is covered with Roman tessellated pavements, found in Dorchester. More than twenty sites are known and recorded within the comparatively small area (viz. eighty acres) of the Roman Durnovaria.

The present find may be referred to as the 'Fordington High Street' pavement (pl. XLIII). It was discovered on 5th October 1927, and is now being taken up and relaid in the School of Art adjoining the Museum. It was presented by Messrs. Lott & Walne, on whose premises it was found.

The general design is familiar to those accustomed to these works of art, but the special charm of this mosaic is the skilful colour treatment, there being various shades of yellow, red, and blue, in addition to the more common colours.

The rectangular portion consists of nine octagonal panels separated from one another and yet connected by the well-known cables, treated in many colours, one of the most effective features being the double guilloche worked in red and yellow. At two opposite sides of the rectangle, and running the full length, are panels about a foot wide containing a graceful, but conventional, floral pattern, an amphora being introduced in the centre. Beyond the panel at one end is a semicircular apse, surrounded by bands of cables and a double guilloche. In the centre of the apse is the representation of Neptune with locks of reddish hair, and on the light blue background are four fish of different sizes. Although fragments of coloured wall plaster, roof and flue tiles have been found, no coins or anything to assist in fixing the date of the house have come to light. It is of some interest to add that the floral pattern referred to above is practically identical with a portion of Roman mosaic described and figured in Professor Buckman's *Antient Corinium (Cirencester) Remains of Roman Art*, second edition, 1851, p. 38, pl. VI, fig. 2. He says it is 'a beautiful wreath pattern worked out in the freest possible style; similar designs occurring frequently on fine Roman Samian pottery'. In the same pavement there is also a head of Neptune 'with tangled sea weeds' as hair. It would not be a great stretch of imagination to

suggest that one of these mosaics was copied from the other, or that both were laid down by the same artist. Professor Buckman considered that the Corinium mosaic might be attributed to the early part of the second century A. D., as large numbers of coins of Hadrian were found.

This 'Fordington High Street' pavement was laid down within seventy-three yards of the pavement now on the floor of the museum, found in Durngate Street in the year 1905.

The walls of York.—Mr. S. Miller sends the following note:—In 1927 excavation was carried on for two months along the line of the fortress wall between Bootham Bar and Monk Bar. It was found that the reconstruction which took place at the beginning of the fourth century (represented by the Multangular Tower and the adjacent stretch of wall in the Museum Gardens) had been continued past Bootham Bar along the whole length of the north-west front and for some distance along the north-east front. In the garden of the Canons' Residence, to the north of Bootham Bar, the fourth-century wall and an interval tower of the same date were found; the wall standing to a height of 14 ft. Alongside lay the remains of an earlier stone barrack, probably built in Trajan's reign, which had been demolished when (or before) the fourth-century reconstruction of the defences took place. The position of this disused building in relation to the fourth-century wall seemed to imply that the earlier defences on this (the north-west) side of the fortress had lain farther out than the line of the fourth-century defences. Besides showing that the fortress had been reduced and barracks disused at the beginning of the fourth century, the excavations of 1927 further emphasized the rarity of fourth-century pottery and coins within that part of the interior which adjoins the defences. This may be connected with the changed conditions of service under the military system of the later empire. In 1928 it is hoped to trace out the plan of the early barrack and excavate the fourth-century interval tower, and to continue the working out of the earlier and later systems of defence in their structural relation to one another.

A round church at Garway, South Herefordshire.—Mr. G. H. Jack, F.S.A., Local Secretary, sends the following note:—Garway is a remote parish in South Herefordshire, situated about 15 miles from the city of Hereford and 15½ miles from Abergavenny in Monmouthshire. The existing fourteenth-century church, with its tower set at an angle with the nave and other interesting features, has always attracted the attention of antiquaries and architects, but it was not until Mr. G. E. Chambers of the Royal Commission on Ancient Monuments drew my attention to some curved stones at the base of the twelfth-century chancel arch that any attempt was made to elucidate the unusual position of the tower or to prove the existence of the foundations of the early church. During the summer of 1927 I conducted excavations on the site with the result shown on the plan.

The foundations of local, unsquared sandstone were laid in good mortar and were about 2 ft. 6 in. in depth and 5 ft. 8 in. wide. On these the circular wall of the church, about 3 ft. 6 in. thick, was built.



Alfred Watkins, F.R.P.S., photo.

FIG. 1. Garway church: foundations of the Round, N. side



Alfred Watkins, F.R.P.S., photo.

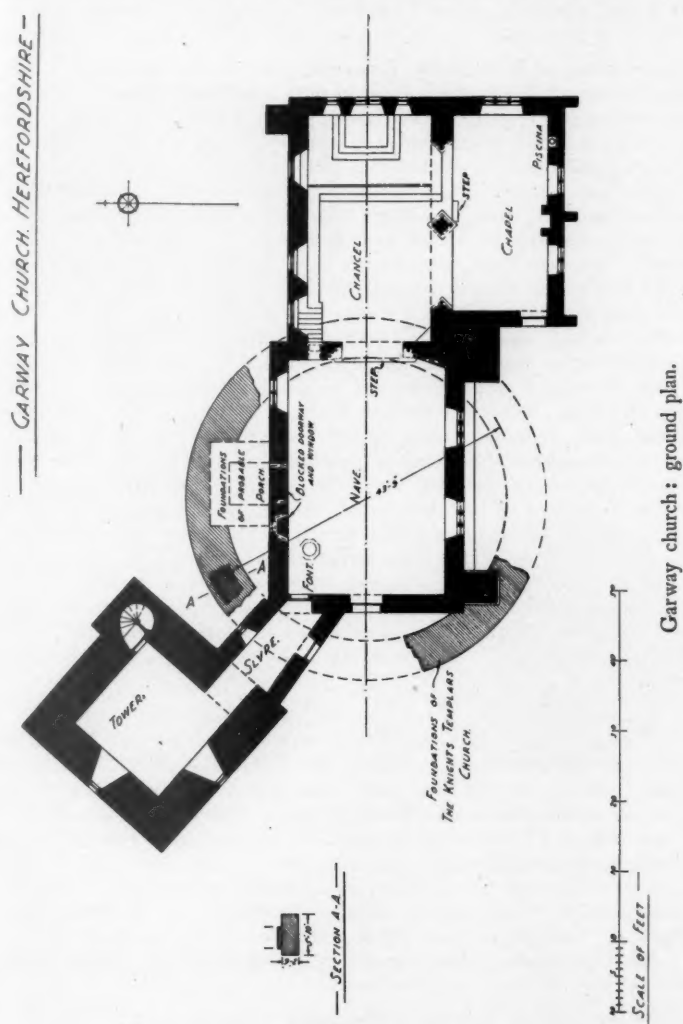
FIG. 2. Garway church: foundations of the Round, S. side



Alfred Watkins, F.R.P.S., photo.

Garway church : curved foundations at SW. angle of existing church

The internal diameter of the circular nave was 43 ft. 9 in. (pls. XLIV, XLV). During the excavations one fragment of twelfth-century mould-



ing was found and two fragments of other worked stone, possibly parts of a stone coffin.

Lying on the top of the foundations I found the top of a two-branch iron candlestick much corroded. Several fragments of red pottery showing medieval glaze were found. Unfortunately I had

insufficient time (and money) to search for the remains of a porch at the west end, or to make any attempt at excavating the site of the preceptory buildings, remains of which undoubtedly exist on the south side of the church.

Excavations at West Derby, Liverpool.—Mr. F. H. Cheetham, F.S.A., Local Secretary, sends the following note:—A trial excavation, under the direction of Professor J. P. Droop, was made in July–August 1927 in the Castle Field, West Derby, Liverpool. The site (O.S. map CVL. NE.) is figured and described by our Fellow Mr. Willoughby Gardner in *V.C.H. Lancs.* (1908), ii, 543–5, where it is stated that ‘only faint traces now remain of the once important little castle here’. Professor Droop summarizes the results of the excavation as follows:—The castle, of the early Norman type, with motte and bailey, was levelled in 1817, but the line of the ditches can still be traced. Two trenches were cut, one across the ditch between motte and bailey, and the other across the ditch outside the bailey. The first showed that the dividing ditch, apparently 12 m. broad, was really two ditches each about 4 m. wide cut with V-shaped section into the virgin sand and boulder clay to a depth of 1.25 m. below the present surface. The second trench showed remains of an artificial raising of the level on both sides of the outer ditch, which proved to be single, 9 m. wide, and cut to the same depth as the inner ditches (1.60 m. from the surface). At the bottom was found a framework of oak beams about 3 m. square preserving at the four corners remains of uprights which were supported by slanting struts. It is thought that this structure, interesting for its details of medieval carpentry, is the support on to which the drawbridge was lowered. Some lead glaze pottery of the type assigned to the fourteenth and fifteenth centuries was found in both ditches and, in the outer, part of the sole of a shoe of much the same date. It is hoped to continue the investigations.’

Seal of the Mayor of Pontefract.—On 1st December the Mayor and Corporation of Pontefract exhibited the seal of the office of mayoralty of the borough, which had been lost since the beginning of the eighteenth century and was found in August last among the effects of the late Major Arundel of Ackworth. It has now been restored to the borough by his daughter.

It is of silver, circular, $1\frac{5}{8}$ in. in diameter, mounted in a turned wooden handle. The field is divided quarterly: 1. a three-towered castle, 2. a bridge, 3. the capital letter V, 4. the capital letter P, for Villa Pontisfracti. The legend in Roman capitals begins in the middle of the left-hand side and reads:—

❖ SIGILL : OFFIC : MAIORAL : VILL : PONT : .

On the shank is engraved the date 1638.

An entry in the accounts of William Stable, mayor in 1701, is of interest in connexion with its loss. The entry reads: ‘To be delivered over by him or his executors into the p’sent mayor’s hands the following particulars, which should have been delivered upp to the

Mayor by him but was not.' Among the 'particulars' is 'an old seale of the office of Mayoralty'.

Presumably as a result of this loss a not too successful copy of the seal was made in 1701 and this also the Mayor and Corporation exhibited. It is of silver, $1\frac{3}{8}$ in. in diameter, mounted in a turned



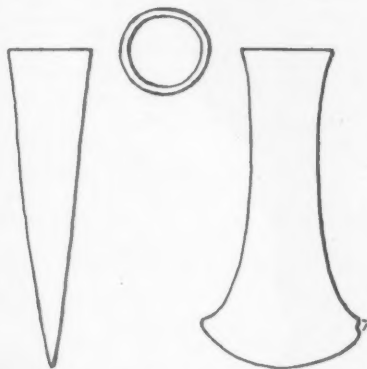
Seal of the Mayor of Pontefract: matrix and impression ($\frac{1}{2}$).

ivory handle. The design and legend are the same as on the older seal, but the bridge in the second quarter has degenerated into a label of three pieces and is so described in Jewitt and Hope's *Corporation Plate*. The legend starts in the usual place at the top. Round the shank is engraved 'Ex Dono Rob^t Lowther Alderman 1701'.

Bronze chisel from Ham Hill, South Somerset.—Mr. H. St. George Gray, Local Secretary for Somerset, sends the following note:—Bronze chisels of the socketed-celt type are so rarely met with that it seems worth while to give outlines of an example, attributed to the Late Bronze Age, found at the east end (Bedmore or Batemoor Barn) of Ham Hill (but not in archaeological excavations conducted on the site). It was recently presented to the Somerset County Museum at

Taunton Castle, by Dr. S. L. Brimblecombe, of Stoke-under-Ham. There is no sign of this specimen ever having had a loop. The socket is of a wide oval section, measuring externally 16.9 mm. by 18.3 mm. The implement is 63.2 mm. ($2\frac{1}{2}$ in.) in length; maximum width at the crescentic cutting-edge, when complete, 32 mm. ($1\frac{1}{4}$ in.). The weight in its present condition is 36.93 grammes.

The nearest parallel known to the writer is the rather smaller chisel recovered from a pile-dwelling in the Thames at Sion Reach, exhibited in the London Museum (no. A 11714). Its length is 52 mm.; width



Bronze chisel, Ham Hill, South
Somerset ($\frac{3}{4}$).

29 mm.; socket 17 mm. Another, of about the same length, but wider in proportion, also without loop, was found in a hoard at Reach Fen, Burwell, Cambridge, and has been figured.¹ A similar chisel, $2\frac{1}{8}$ in. in length, was found in Mildenhall Fen, Suffolk.² One having a wide cutting-edge, without loop, was found on Meon Hill, Clopton, Glos.;³ it is said to be similar to Dr. Plot's specimen in the Ashmolean Museum, which is 35 mm. in length, width 39.5 mm., thickness 17.5 mm. This chisel has a narrow moulded collar at the neck.⁴

A small celt, or chisel, was found in the Allhallows hoard, Hundred of Hoo, Kent;⁵ and another in Feltwell Fen, Norfolk (Pierpont Morgan Collection, British Museum, 1909). A long, narrow celt, or chisel, having an octagonal socket, was found in the great hoard at Carlton Road, near Attleborough (Norwich Museum).⁶

Another specimen, with moulded collar, exhibited in the Pitt-Rivers Museum, Oxford, comes from Ireland. Its length is 61 mm.; width,

¹ Evans, *Bronze Implements*, 133; *Proc. Soc. Ant.*, v, 424.

² Evans, *Bronze Implements*, 133.

³ *Archaeologia*, v, pl. viii, no. 23.

⁴ Plot, *Natural History of Staffordshire*, p. 404, pl. xxxiii, 7; Evans, *Bronze Implements*, 133.

⁵ *Arch. Cantiana*, xi, 123.

⁶ Figured in Evans, *Bronze Implements*, 133.

edge 3.5 mm., middle 12 mm.; socket 18 mm. Other Irish specimens have been recorded, including those from Burrisokane, co. Tipperary, Ballymoney, co. Antrim, and a specimen from a grave-mound on the banks of the river Lagan, co. Down.¹

Socketed bronze chisels having narrow cutting-edges which do not expand (of the type found in Heathery Burn Cave²) are not dealt with here.

Reviews

Registrum Thome Wolsey Cardinalis Ecclesie Wintoniensis Administratoris. Transcribed by F. T. MADGE, M.A., and HERBERT CHITTY, M.A., F.S.A., and edited with an Introduction by Herbert Chitty. Canterbury and York Society. 10 x 6½; pp. xxvii + 204. Oxford University Press. 1926.

The tenure of the see of Winchester by Wolsey as 'perpetual administrator' covers the last year and three-quarters of his life. His bulls of provision were issued on 6 February 1528-9, and he was enthroned by proxy on 11 April following. Throughout the whole period his office was exercised by deputy, the discharge of its formal duties being committed to Dr. John Incent, who combined the positions of vicar-general and official principal. After his fall, he continued to retain the administratorship, and the see was left vacant by his death on 30 November 1530. On 28 March, however, he had sent a mandate to Incent expressing his intention of residing permanently in his archbishopric of York, and authorizing his delegate at Winchester to admit the king's nominees to any vacant benefices. This surrender of his rights of presentation and collation to the Crown, in return for an annual thousand marks from the revenues of the see, included the recognition of the king's liberty to nominate any Catholic bishop to the exercise of episcopal functions in the diocese, to whom the vicar-general was to issue the necessary commission as from the Cardinal himself. The actual deed of surrender (17 February 1529-30), in consequence of which these letters were made out, is not entered in the register, but is printed in the appendix to this edition from the original indenture in the Public Record Office; while its broken seal, the only remaining example of that used by Wolsey for this diocese, appears as the frontispiece of the volume.

The register is thus merely a register of acts performed in the Cardinal's name by his accredited deputy. In this respect it resembles several other episcopal registers of the period, of which Wolsey's own register at York and that of Silvestro de' Gigli at Worcester are conspicuous examples. It also shares the characteristic features of similar collections of documents in their later stage. Its contents are practically confined to the record of acts connected with institutions to benefices. The exceptions are the detailed memorandum of

¹ The two first-named of the Irish specimens are figured in *Bronze Age Guide*, *British Museum*, 1920, p. 58, *a* and *b* respectively.

² *Archaeologia*, liv, 100; *Bronze Age Guide*, *British Museum*, 48.

the enthronement and installation, the letters from Wolsey to Incent already mentioned, an appointment by Incent of the rector of Whippingham as his commissary, sequestrator, and penitencer in the Isle of Wight (with which, it may be assumed, similar appointments in other deaneries or groups of deaneries were concurrent), a certificate of the bigamy of a sawyer in the soke of Winchester who had claimed benefit of clergy, two grants by patrons of the next presentation to benefices, two grants of offices connected with the temporal property of the see, which were made by Wolsey after his disgrace, and a decree of the union of the rectory of Wisley with that of Byfleet, completed after the Cardinal's death. Apart from these ten documents, some of which are closely allied to the main themes of institution and the vacancy of livings, the rest, amounting to some three-quarters of the register, deal with successions to vacant benefices, and include numerous deeds of resignation, which were important in view of the pensions involved. Of these, the four records of elections to the headship of religious houses, the abbeys of Hyde and Wherwell and the priories of Merton and Reigate, are in a class by themselves; while the institution of a priest to the chantry at St. Stephen's altar in Godshill church embodies the deed of foundation of the chantry and the ordinances connected with it.

It cannot be denied that a register of this type is infinitely less interesting than its predecessors of the thirteenth and fourteenth centuries, with their abundant variety of contents: it offers in this respect the strongest contrast to those of John of Pontoise, already published by the Canterbury and York Society, of John Sandale and Rigaud of Achères, so exhaustively edited by the late F. J. Baigent for the Hampshire Record Society, and of Wykeham, edited for the same society by R. L. Kirby. The documents relative to each entry, moreover, are given by the registrar with what seems at first sight tedious prolixity. Every legal instrument is transcribed at length, and we can imagine that many readers, in search of simple facts, will be content with perusing the English summary prefixed to each section in the printed volume, and leave the Latin text to take care of itself. On the other hand, while it is possible to dismiss a certain amount of any of these instruments as common form, there is a great danger in despising common forms which are subject to significant and constantly changing variations. Their prolixity had its rational excuse, and the student of legal documents for historical purposes finds that, as his acquaintance with their technicalities increases, his respect for them becomes highly meticulous in the true sense of that abused adjective.

Mr. Chitty has certainly not been wanting in respect for common forms, and his admirable introduction to the register justifies his care, particularly in the attention which it pays to the question of monastic elections as illustrated by the four long records in the text. Comparatively short as it is, this introduction is a work of accurate research for which a very wide range of authorities has been consulted. In such a case as this, contributory sources afford help which becomes embarrassing; and Mr. Chitty probably could have extended his work considerably, had space allowed. We may suggest, however, that one

or two additional references might have been made. The note (p. xiii) upon the three methods of canonical election should have included a mention of the late Dr. Wickham Legg's learned article in *Transactions of the St. Paul's Ecclesiological Society*, vol. iii. On p. xxv an allusion is made to the absence of any record of ordinations from the register. There is no mention, in fact, of the performance of any episcopal duties by a suffragan. It would be very unsafe, however, to conclude that no such duties were performed; and we can hardly agree with Mr. Chitty that it is doubtful if any ordinations occurred in the diocese while Wolsey ruled it. In Wolsey's York register, which covers a much longer period, there is exactly the same silence with regard to suffragans and ordinations; and we can hardly suppose that there was a total cessation of purely episcopal work in the diocese of York between 1514 and 1530, while vicars-general and officials pursued their tasks with methodical diligence. Mr. Chitty, referring to Stubbs's *Registrum Sacrum*, notes that William 'Hogieson', *Dariensis episcopus*, acted as suffragan for Foxe in the diocese of Winchester from 1520 to 1525, and as suffragan of York in 1530. The career of William Hogeson, titular bishop of Dara, was traced, as far as was possible, in an article in the *Yorkshire Archaeological Journal*, vol. xxiv, in which it was shown that he retained the rectories of Burghclere and Chilbolton, doubtless given him by way of payment for his services, as late as 1535. The beginning of his employment at York is uncertain, but it is reasonable to suppose that he continued his work at Winchester under Wolsey. The absence of any letters of commission issued by the vicar-general is no proof that such letters were not issued to a suffragan by Wolsey himself; and the inclusion of the confirmation of appointments of suffragans by the Crown among the matters committed by Wolsey to Incant in 1530 was consequent upon Wolsey's surrender of his rights of appointment to the king.

The information to be derived from the careful study of records which may be criticized, after a hasty glance, as purely formal, may be illustrated conspicuously by reference to the record of the enthronement of Wolsey in the person of his proctor, Dr. William Britten, on 11 April 1529. The enthronement was followed by the assignation to the bishop of his stall in the choir; and it is noteworthy that, during high mass, which was celebrated by the prior of Winchester, the proctor, who in every respect was treated as the bishop would have been, remained in the choir-stall. This fact is important as indicating the distinction in monastic cathedrals between the use of the bishop's throne, whether as a permanent or temporary structure, and the stall which he occupied as an honorary member of the convent. This point, on which there is some confusion of ideas, is brought out very clearly by the distinction between enthronement and installation in the Marian statutes of the church of Durham. Further, the interesting reference to the presence of the prior *in pontificalibus* at an enthronement recalls the fact that, as early as 1382, the prior of Winchester had made good the custom of wearing full pontifical vestments, including the precious mitre with jewels, even when the bishop was present. This is stated in a letter to the prior of Durham, printed in *Hist. Dunelm. Scriptores Tres*, and written apparently in answer to an application for advice on the point

from prior Walworth, who had recently acquired the privilege of wearing the mitre. In view of this, a later grant (1398) to the priors of Winchester, printed in the *Calendar of Papal Letters*, v, 194, is merely a confirmation of an established right.

Another interesting point is the part taken in elections at the nunnery of Wherwell by the three secular canons and prebendaries who formed a nominal part of the establishment. The double character which the nunnery, like other nunneries of ancient foundation in Wessex, originally possessed, was evidently emphasized in the sermon preached before the election of Anne Colte, in August 1529, by Dr. John Fawne, prebendary of Middleton, from the text *Congregabunt filii Jude et filie Israel pariter et ponent sibi unum caput unum* (Hosea i, 11). It appeared that the sons of Judah at an election had two votes each in person or by proxy, while each of the daughters of Israel had only one. Such little points may be elicited from texts which it would have been difficult to print at less length without omitting or obscuring details of which only outstanding examples are noted here. The texts themselves are given with great accuracy. A few *errata* are noted at the beginning: we also note (p. 149) *interpollatis*, which seems to be a misprint for *interpellatis*. Mr. Chitty gives several useful references in foot-notes: his allusions to sources of Canon Law are minute and exact, but, for purposes of reference, Richter's edition of the *Corpus Juris Canonici* (1837) is superseded by Friedberg's recension, with many additional variants of the text, published in 1879. A. HAMILTON THOMPSON.

The Church Plate of Berkshire. Edited by JOHN W. WALKER, O.B.E., F.S.A., and MARGARET I. WALKER, R.R.C. 9½ x 6½. Pp. [12] + xiv + 384. Winchester: The Wykeham Press. Privately printed, 1927.

This book begins with a Dedicatory Note to Her Majesty the Queen; a kindly appreciative foreword by Dr. Strong, Lord Bishop of Oxford; a Preface; and an Historical Introduction by the authors on the subject of Church Plate. These are followed by detailed accounts of the altar vessels now belonging to some 264 churches (including chapelries) within the royal county. They are arranged alphabetically. There is an Index of Persons and Places. There is no proper Index of Armorial; no Chronological List of Plate; no Index of Goldsmiths' Marks; all of which are essential, at least from the worker's point of view.

In Berkshire there are six pieces of Pre-Reformation vessels. They are found in the following parishes: Challow, Childrey, Garford, Midgham, Radley, and Wootton. All are patens. Three of them are hall-marked, viz. Childrey, 1496; Radley 1506; and Midgham, 1531. The other three are of conjectural dates. Garford is assigned to c. 1450; the depression is quatrefoil; it might be considerably earlier in date: Wootton is said to be c. 1460, though it bears a maker's mark which appears to be that given by Jackson in his *English Goldsmiths and Their Marks*, at 1536, and noted by him on a set of apostle spoons at Messrs. Christie's in 1903; Challow is conjectured to be c. 1520. Compared with many other counties, Berkshire is rich in Pre-Reformation vessels.

The Marian plate, erroneously described as a paten, at Windsor Castle (1556), is very interesting. It may have been a domestic piece given in the following reign or that of James I, for the collecting of alms. Patens $1\frac{3}{4}$ in. in diameter were not used for eucharistic purposes in the sixteenth century.

Our authors describe some 46 chalices and 34 patens belonging to the Elizabethan period. The St. Helen's, Abingdon, chalice and paten, which are stated to be of 'foreign workmanship, probably dating from c. 1760', bear London hall-marks. The date-letter looks (see illustration, p. 4) like that of 1594. This chalice has been 'improved' by the addition of the sacred monogram and cross, and embossed with flowers, fruit, and a skull and cross-bones.

Most of these vessels are by well-known Elizabethan goldsmiths. The mark TG on the South Hinksey chalice probably denotes an Oxford goldsmith. The Long Wittenham chalice and paten cover (1576-7) were mended by Timothy Ley about 1725, and again in 1912 by Lambert, of Coventry Street. The earliest in the county is found at Buckland, 1565; the latest at Longworth, 1603; the latter has what is usually described as a V-shaped bowl and a baluster stem. The chalice at Garford is an Elizabethan beaker of the year 1593. There is no example of an Elizabethan flagon, the earliest flagon in Berkshire being found, not at St. Mary's, Reading, 1628, as stated on p. xlii, but at Hurst, 1611.

The seventeenth-century vessels in Berkshire are very similar to those in other counties, but one error must not be overlooked. The authors failed to recognize a Laudian chalice and paten in the parish of Hurst, and misread the mark as that of an Elizabethan goldsmith. Both pieces bear the maker's mark only, viz. HW with pellets above and possibly some animal below. The mark is given in Sir Charles Jackson's *English Goldsmiths*, etc., p. 482, as an unscribed mark of a provincial goldsmith of one of the minor Guilds; which might account for the absence of regular hall marks. Sir Charles noted this mark on a pair of candlesticks belonging to Mr. L. Crichton, and gives the date c. 1680, with a possible variation of a quarter of a century. The Hurst chalice and paten bear the usual characteristics of the Laudian vessels. The chalice carries a hemispherical bowl, hexagonal stem divided by a pierced knop, standing on an hexagonal-lobed foot with moulded edge. Moreover, the inscription which it bears states that it was given by some unknown donor about 1633. These vessels therefore may be regarded as being amongst the most interesting in the county. Other pieces were made for this parish by John Keith in 1851. He apparently used the metal from a seventeenth-century vessel or vessels belonging to Hurst; for the inscription 'Circa 1633' is repeated on the modern ones. Keith, or the then incumbent, set out to copy the Laudian vessels, but could not resist putting an engraved design round the lip of the new chalice, and an eight-lobed depression with *Agnus Dei* in the centre of its paten. Between forty and fifty of these Laudian chalices are known. Incidentally it is interesting to note that the adjoining county of Oxford possesses only one example of a Laudian chalice and paten, viz. at Launton, 1633.

The Church Plate of Berkshire is a fine piece of work. The labour

and patience involved are perhaps better known to the present writer than to the majority of its readers. The church owes a deep debt of gratitude to the laity who have done a work which might have been undertaken wholly by the clergy. Now to the names of Edwin Freshfield, J. E. Nightingale, T. M. Fallow, H. B. McCall, G. E. Halliday, E. A. Jones, C. A. Markham, H. C. Moffatt, and many other lay-folk, may be added with thanks and congratulations those of Mr. J. W. Walker and Miss Margaret I. Walker.

J. T. E.

Later Greek Sculpture and its Influence on East and West. By A. W. LAWRENCE. 10 x 7½. Pp. xvii + 158. London: Cape. 25s. net.

Probably the most valuable part of this study is the appendix of 41 pages, which gives a list of 400 pieces of sculpture of the period from about 334 to the later first century B. C., classified according to what the author considers their probable date. In such a list most readers will be able to name what they regard as surprising omissions; the author has, however, saved himself by 'making no pretension of including all published Hellenistic sculptures', while he believes that his list 'includes most of those which can be approximately dated in the present state of our knowledge'. Therefore we refrain from pointing out such omissions; though we cannot but regret the deliberate exclusion of sculptures of children, which are reserved for a forthcoming article in the *Annual of the British School at Athens*. That has cut out a very characteristic feature of the period.

The main part of the book is an account of the development of sculpture, with illustrations, sometimes rather capriciously chosen, but almost without exception well reproduced. One would have preferred a larger proportion of profile views; that is a form of illustration much neglected in works on sculpture, a neglect hardly justified by the fact that so many noses are restorations. The sketch of the development is, from a literary point of view, not very lucidly or carefully written, and rather breathless, as though one were being walked through a gallery by an impatient guide; and it is hardly too much to say that the only portions which leave a lasting impression are those where the author indulges in quotations from other writers such as Sir Reginald Blomfield or Dr. Gerhard Krahmer. But there could hardly be a more difficult task than to find a way through the fragmentary ruins of the sculpture of the period; and we are not ungrateful to the author for his attempt to do so, and to bring out the connexion, however vaguely, between the art of the countries beyond the western and eastern fringes of the Greek world, from Etruria to the Far East, and that of the centre.

G. F. H.

Excavations in New Forest Roman Pottery Sites, with Plans and Illustrations of the Construction of the Pottery Kilns, of the different wares made, and of a Potter's Hut. By HEYWOOD SUMNER, F.S.A. 8½ x 5½. Pp. ii + 123. London: Chiswick Press. 1927. 12s. 6d.

Two treatises incorporated in this volume have been already noticed in this *Journal*, vol. i, pp. 68, 252; but thirty pages are new, and it is a distinct advantage to have the accounts of these related excavations

bound in one volume, especially when they are graced by further illustrations from the author's own hand. Native potters were evidently busy in the New Forest, taking advantage of the outcrop of suitable clays; but the period of their activity is uncertain, as there is a strange paucity of coins on the ruined kiln-sites. Two more of these at Linwood are described, and one of the workmen's huts has at last come to light near Islands Thorns. The latter yielded two pottery vessels about $1\frac{1}{2}$ in. high, evidently toys for children; they are now in the British Museum as a gift from the author. The conclusion of the whole matter is that 'New Forest pottery, although Romanized in form and in material, retains local British character of its own'. It is usual to assign this industry to the third and fourth centuries, and the variety of output is well shown in the sectional diagrams, which satisfy the most exacting requirements. It is a pleasure to find that a picturesque style and many human touches do not detract from the scientific value of what will be recognized as a serious contribution to Roman archaeology.

REGINALD A. SMITH.

The Week. The origin and development of the Seven-day Cycle. By F. H. COLSON, M.A. $7\frac{1}{2} \times 5$. Pp. viii + 126. Cambridge: at the University Press. 1926. 5s.

The division of time into cycles of seven-day periods has so long been accepted as one of the governing facts of everyday life that we are apt to forget how artificial and arbitrary such a division really is. Though we can recognize in the names which we give to the days of the week those of Teutonic deities, yet, with the possible exception of a few medical practitioners who may still head the entries in their day-book with the Latin equivalents, we do not associate the days with the planetary system. The history of this time-division, which is quite independent of the year and the month, is not easy to trace, and in attempting to unravel the mystery of the week, Mr. Colson has entered into what has been hitherto unbroken ground. The interesting point which emerges from his examination of the references in Greek and Latin authors is the comparative lateness of a seven-day cycle. The Roman calendars marked the recurrence of the *Nundinae* or market-day every eighth day, a fact which, apart from its convenience, had accustomed the subjects of the Roman emperors to a recurring cycle of days. But probably of far greater importance appears to have been the coincidence of the Jewish sabbath, with its abstention from every form of manual labour, and the Saturn's Day, which was deemed to be unlucky. The historian Dion Cassius definitely equates the two. 'The Jews', he writes, 'have consecrated the so-called day of Saturn and while performing on it many observances peculiar to themselves lay their hands to no serious work.' The influence of the Christian observance of the Sun's Day and a similar observance of the worshippers of Mithras, also undoubtedly exercised a widespread influence in securing the general acceptance of a seven-day week.

At first sight the difference between the celestial order of the planets, as accepted by the Romans, and the cyclical order of the planetary days, appears to offer some difficulty, but Cassius supplies a solution which is probably the key to the whole question. He points out that

the day order of the planets can be arrived at by dropping two of the celestial order and taking every fourth planet for each day in succession. He goes on to give an explanation of this, for he states that just as each day is under the regency of a planet, so too is each hour (reckoned from sunrise to sunset) under the control of a planet. This will bring the first hour of each day under the control of the planet fourth in the series from that which was regent for the previous day, which will give the name to the day. This 'chronocratory' of the planets thus appears to be the true origin of the order of the planetary days, and, in fact, of the seven-day cycle of the week. The author points out that Chaucer, in his Knight's Tale, shows himself acquainted with this chronocratory and with the scheme of the regency and control exercised by the planets. A chapter is devoted to the consideration of the indications of the week in the New Testament and amongst the Early Church, and to the driving force which led to its easy and general acceptance. The more technical aspects of the subject, including the Greek text of Cassius and the quotations from Horace and Juvenal, are given in an appendix, together with the names of the days in eighteen European languages.

Mr. Colson is a careful scholar, and is impartial in stating his arguments and the objections which might be raised. He has written a book of extraordinary interest. G. A. AUDEN.

A History of Christian-Latin Poetry from the beginnings to the close of the middle ages. By F. J. E. RABY. 9 $\frac{3}{4}$ x 6 $\frac{1}{2}$. Pp. xii + 492. Oxford: at the Clarendon Press. 1927. 21s.

This admirable book puts for the first time on a sound basis a study important alike to students of the classics, of religion and liturgy, and of medieval life. The slight but not unattractive sketch by Archbishop Trench is maimed by his exclusion of poems doctrinally distasteful to himself, and Manitius, in his monument of learning, seems to care less for the poetry than the prose of the period, and hardly to pay attention enough to work done outside his own country. Mr. Raby has given us, in what must have been the result of the labour of several years, an exhaustive and thoroughly documented survey, and in this and Miss Waddell's *Wandering Scholars* the English reader has now a complete picture of the whole Latin poetry of the middle ages, with the exception of certain didactic works not of a very inspiring kind, though of some literary importance, for which he must turn to Faral and other French writers.

The Antiquaries Journal is not the place for a complete analysis of Mr. Raby's orderly and balanced progress from St. Ambrose and Prudentius to St. Thomas Aquinas and beyond: it must suffice to single out for especial praise his treatment of the earlier part of his subject, in Italy, Gaul, Spain, and Ireland, and to commend, at a later date, the account of the work of Notker Balbulus and the rise of the sequence, which is the best and clearest with which I have yet met. Antiquaries will be particularly grateful, I think, for pp. 363-75, an exposition of the symbolism used by Adam of St. Victor and other poets in connexion with the Blessed Virgin Mary, for it is of the highest value not only in explaining many difficult allusions in literature, but

in the interpretation of detail in non-literary works of art—pictures, sculptures, and textiles. I would also commend Mr. Raby's appreciation of the service to hymnody rendered by the early Irish poets, whose introduction of the double rhyme was afterwards raised to such perfection by Adam of St. Victor and his school, and by St. Thomas Aquinas.

I have noticed few omissions. I should have liked to see some mention of the poems of Sigebert of Gembloux (or Liège), and Spain receives little attention after the epoch of the Mozarabic hymns. Is not Gil de Zamora worthy of a passing notice? In my view, a 'rudimentary quality' is a little less than just, applied to *A solis ortus cardine* (Sedulius), and the poem by Fulbert of Chartres quoted on p. 261 does not display 'a curious and original metrical combination', but is an exact copy of Horace's Ode beginning *Solvitur acris hiemps grata vice veris et Favoni*. On p. 441 *agnosca* must be a misprint, I think, for *agnosce* or *agnoscas*, and on p. 454 read 'one hundred and fifty' for 'one hundred and fifteen'.

The average reader, antiquary or other, does not possess in his library the fifty odd volumes of *Analecta Hymnica*, nor the countless learned periodicals through which the minor sacred verse of this millennium is dispersed: he will accordingly be grateful to Mr. Raby for the freedom with which he has quoted, so that the book is of the nature of an anthology as well as a literary history, with commentary displaying sound judgement as well as deep learning. It is a noble volume, and I welcome this opportunity of thanking for it both Mr. Raby and the Clarendon Press.

STEPHEN GASELEE.

Studies in St. Bernard of Clairvaux. By WATKIN W. WILLIAMS, M.A. $7\frac{1}{2} \times 4\frac{3}{4}$. Pp. vi+160. London: S.P.C.K. 1927. 7s. 6d.

The reader of *Revue Bénédictine* who makes a point of consulting the admirable bibliographical *bulletins* at the end of each number will discover in the number for October 1927 a long list of recent studies on Bernard of Clairvaux. Among them he will find mentioned Mr. Watkin Williams's edition of the *De diligendo Deo* (his translation of the *De gratia et libero arbitrio* might well have been added), and a number of works, some popular and some more technical, in various languages. The attraction of the saint shows no sign of diminution. In England his fame was established by Cotter Morison's brilliant biography, in which Bernard was treated like one of Carlyle's heroes; but it is to the Abbé Vacandard that we owe the first complete and solid account of Bernard and his age, and it will be a long time before this masterly work is superseded. Mr. Watkin Williams in his modest study deals only with the early career of Bernard, and does not claim to do more 'than to give some account of the atmosphere in which St. Bernard was born, in which he was nurtured, and in which he was professed; and to indicate the direction in which he moved at the outset of his career'. The book is amply documented and is based on a careful study of the available evidence. The authorities are used wisely, and we can only hope that Mr. Williams will continue the story with an account of Bernard's activities outside Clairvaux in the great days when he, more than the Pope, spoke in the name of Christendom.

It would be interesting to inquire what was the secret of Bernard's immense personal influence in his day—remembering that the answer will, to some extent, explain why the saint is still honoured so highly by men of different religious and political opinions. For Bernard, although he was manifestly a saint in the fullest meaning of the word, had certain defects and prejudices which did not escape the more intelligent among his contemporaries. With his own flock and those whom he knew personally he could deal generously and tenderly, but where his prejudices were concerned, and especially when he had to form conclusions at second hand, he was apt to fall into serious errors of judgement and even to be lacking in charity. The affair of Gilbert de la Porrée and that of Abélard do not entirely redound to his credit. A very fair and able judge, Otto, bishop of Freising, who was certainly no enemy of Bernard, sums up the matter very clearly from the point of view of one who saw the true meaning of the intellectual movement which was the glory of twelfth-century France. He says: '*Erat enim praedictus abbas (sc. Bernardus) tam ex Christianae religionis fervore zelotypus quam ex habituali mansuetudine quodammodo credulus, ut et magistros, qui humanis rationibus seculari sapientia confisi nimium inhaerebant, abhorreret, et si quidquam ei Christianae fidei absonum de talibus diceretur, facile aurem praeberet.*' These unprovoked attacks made Bernard unpopular wherever, as in the circle of Walter Map and John of Salisbury, men were gathered together in the name of learning and reason without any leaning towards asceticism.

Bernard was a pure mystic, and, although in his youth he had read the classics, he had no humanistic leanings, but forged his own Latin style by the sheer strength of his genius. His mysticism is the key to his whole work. Did he love nature?—is a question which Mr. Williams raises, reminding us that Bernard was wont to say with a smile that he had no masters like the beeches and the oaks. Yet Vacandard says that he must have been indifferent to the beauty of nature as such, since he journeyed a whole day by the side of the lake of Geneva without seeing it. The answer is simple. Bernard saw nature as the mystic sees it, not with the modern sentimental eye for its supposed 'beauties', but as that manifestation of the 'everlasting power and divinity' of God, which gives full satisfaction to the eye and heart, for it is a living and marvellous theophany. '*Satiabor cum apparuerit gloria tua.*' But while he was riding by the lake, he had passed beyond created things in inward contemplation. The fruits of his contemplation appear in his treatises and sermons, with their glowing periods filled with a personal devotion to Jesus and to his Passion which is an anticipation of the gospel of Assisi. This it was that attracted his contemporaries who listened to or read his words, and it is the same quality that attracts so many to-day. His devotion began with Jesus revealed in his earthly life and turned too towards his Mother, for whom the Cistercians had a special veneration. How real this historical and emotional approach could become was shown by the success of Franciscanism in the next century. For this great movement Bernard prepared the way, and his writings became, in the words of M. Étienne Gilson, 'a capital source of Franciscan mysticism'.

F. J. E. RABY.

The Roman Campagna in Classical Times. By THOMAS ASHBY, D.Litt., F.S.A. 8 $\frac{3}{4}$ x 5 $\frac{3}{4}$. Pp. 256. London: Ernest Benn. 1927. 21s.

One of the first-fruits of the retirement from office of our Fellow Dr. Ashby, formerly Director of the British School at Rome, is the publication of this valuable and interesting work, which is an addition to the equipment of students of Roman civilization. Scholars are familiar with the contributions which the author has made to many English and foreign periodicals, notably to the *Papers of the British School at Rome*, to *Römische Mitteilungen*, and to *Ausonia*, upon the topography of the Roman Campagna.

The present work gives, in one sense, abbreviations of the detailed descriptions which the author has already written of the topography, within the confines of the Campagna, of the district bounded on the north by the Via Flaminia and on the south-east by the Via Latina, and draws from articles previously published by him upon special sites such as Hadrian's Villa, Alba Longa, Ostia. But the particular importance of the book is that we find in it some of the fruits of the author's researches upon the remainder of the Campagna, comprising the area between the Via Latina and the Via Ostiensis, and thence through southern Etruria northwards to the line of the Flaminia. It is to be hoped that the author, who is now engaged in the publication of a monumental work upon the Aqueducts, will be able to complete, in full detail, the topography of those parts of the Campagna which he now for the first time describes in outline. It is almost an impertinence for me to refer to Dr. Ashby's qualifications for this work, a personal knowledge of the Campagna acquired from his schooldays upwards and a command of the appropriate literature which, it is safe to say, is equalled certainly by no British, and probably by no living foreign scholar. The completion of the author's researches will be all the more valuable inasmuch as the face of the Campagna has undergone striking changes since the days, thirty years ago, when he began his explorations. Although the customs of the year 1519 no longer prevail, when the people of Tivoli allowed Pope Leo X to uproot blocks of travertine from the Via Tiburtina and to take them away for the building of St. Peter's, yet nowadays ancient remains are unwittingly damaged in other ways, for Dr. Ashby tells, in his review of Italian archaeology in *The Year's Work in Classical Studies* (1926-7), how, after Mussolini's proclamation of the 'battaglia del grano', motor-ploughs working for the harvest of 1925 unfortunately destroyed a long portico which formed part of the villa of the Quintilii near the Via Appia. Against the accidental destruction of ancient remains we must, however, set the increased care and system with which discoveries are now recorded. For example, during the construction of the new line from Rome to Naples great pains were taken to record any remains of antiquity discovered in the course of the work, but it seems that very much less than was expected was actually found. Moreover, as Dr. Ashby has mentioned in this volume (p. 126), aerial photography will render in Italy, as it has already begun to render in England, immense service to archaeology, and particularly to topography. An aerial photograph may be expected to reveal the existence of ancient

tracks and sites hidden from exploration on the ground. Even observation from a commanding view point may reveal wonders. For example, in 1920 Dr. Ashby and the writer of this review were tracing the course of the Via Latina from Cassino to Venafrò, and had failed on the climb from the village of S. Pietro in Fine to trace the road to the summit level beyond: but, at the summit itself, our chagrin was turned into amazement, as we paused to survey our climb and saw the course of the Latina ascending the hill with perfect straightness, marked by nothing more than a change of colour in the vegetation.

The introductory chapter of the book is specially valuable to historical students, as the writer deals fully with a variety of topics preliminary to the main purpose of the book, such as the geological history of Latium, the history of the Latin League, the beginning, development, and administration of the Roman road-system, and the various causes which led to the increase and decrease of population in the Campagna. He has briefly touched upon the difficult question of the dating of monuments in *opus quadratum*. Those scholars who are familiar with the results which have been obtained by Dr. E. B. Van Deman in the dating of monuments in brick-faced concrete, will be the first to realize that the discovery of criteria for the dating of *opus quadratum* will be a signal service to Roman archaeology.

It is inevitable that certain areas of the Campagna are possessed of much greater interest than others, and these differences of interest are reflected in Dr. Ashby's narrative. The stretches of the Flaminia and the Salaria within the boundaries of the Campagna are much less fascinating than those of the Appia and the Latina: Fidenae and Eretum, for example, have less to show and are less accessible than Tusculum and Aricia. Dr. Ashby's accounts of Hadrian's Villa, Praeneste, and Ostia will inspire readers to closer study of those sites in the pages of Winnefeld's *Die Villa des Hadrian*, of H. C. Bradshaw's *Praeneste* (in *P. B. S. R.* ix, 233 seq.), and of Calza's *Ostia*.

The book is illustrated by 40 photographs which have clearly been chosen with care from among the vast number at the disposal of the author in his own private collection or from those lent by friends like Miss Bulwer, Father Mackey, and Mr. Swain, photographer of the Near East Expedition of the University of Michigan. But I must confess that some are a little disappointing, e.g. nos. 32 (Lake of Nemi), 35 (Walls of Ardea), and 48 (Quarries near Grotta Oscura). I have detected a few slips, principally in the introductory chapter; and a few misprints, chiefly in the index, have escaped the notice of proof-readers. It is unfortunate that the map at the end of the book is of an unsuitable type, and one feels that, had it been possible, the author would have had one prepared which gave proper emphasis to the ancient roads and sites.

The book can be warmly recommended to all those who are interested not merely in topography, but in the history of Roman civilization. The tracing of the courses of Roman roads, the study of walls, gates, tombs, bridges, the recording of the sites of villas and reservoirs, may seem tedious, but it cannot be doubted that topography is not the least of the aids to the study of ancient culture. No one can read this book without realizing that the author has devoted to its composition his

sincerity, enthusiasm, and profound knowledge of his subject; no one can doubt that his descriptions of ancient monuments are based on close and repeated personal examination. It is, moreover, a pleasure to record the friendly feelings which have always existed between Dr. Ashby and the Italians, with contadino no less than with Commendatore, and to note the high value which is being placed upon the assistance he is rendering in the compilation of the archaeological survey of Italy, planned by the Unione Accademica Nazionale.

R. GARDNER.

Periodical Literature

The British Museum Quarterly, vol. 2, no. 3, includes:—Two rare Greek coins; Cyzicus and the anti-Spartan league; The Order of the Mausoleum; A Greek helmet of the fifth century B.C.; Two Roman finger-rings; Egyptian acquisitions; A Treasure Trove hoard of British coins from Westerham; Early printed books; Elizabethan manuscripts; Greek papyri; British Museum expedition to British Honduras, 1927; Stone Buddhist carving from Cambodia; The preservation of book-bindings.

The Journal of the British Archaeological Association, vol. 32, part 2, contains:—The priory of La-Charité-sur-Loire and the monastery of Bermondsey, by Miss Rose Graham; On the topography of the Cluniac abbey of St. Saviour at Bermondsey, by A. R. Martin; The parish church of All Saints, Kingston-upon-Thames, by P. M. Johnston; St. Mary's chapel, Kingston-upon-Thames, by P. M. Johnston; The Saxon church at Kingston-upon-Thames, by W. E. St. L. Finney; The May games window in the Town Hall, Kingston-upon-Thames, by W. E. St. L. Finney; Provincial Museums: iv, Norwich Museums; The Roman fortress at Caerleon-on-Usk; Primitive man at Sunbury, by W. E. St. L. Finney.

The English Historical Review, January 1928, contains:—Circumspecte Agatis, by E. B. Graves; Rolls from a sheriff's office of the fourteenth century, by H. Jenkinson and Miss M. H. Mills; Thomas Barret: a study in the secret history of the Interregnum, by Miss M. Hollings; John Bagnell Bury, by W. Miller; A Benedictine opponent of John Wyclif, by W. A. Pantin; Sir Edmund Berry Godfrey, Woodmonger, by the late Miss E. A. McArthur; The last days of Colonel Despard, by Sir Charles Oman; Palmerston on the Treaty of Unkiar Skelessi, by R. L. Baker.

Bulletin of the Institute of Historical Research, November 1927, contains:—The undeserved neglect of earlier English historians by their successors, by Sir Charles Firth; Hartland parish documents, by I. D. Thornley; Some documents in the P.R.O. relating to early public health administration, by J. R. Crompton; A list of the archives of University College, London, for the period 1825-1907, by H. Raven-Hart; Corrections and additions to the official 'Return' of members of parliament, 1603-4, by H. Hulme; Summaries of Theses: xxvi, The overseas trade of Bristol in the later Middle Ages, 1399-1485, by

E. M. Carus-Wilson, xxvii, The life and times of John Dudley, Earl of Warwick and Duke of Northumberland, 1504?–1553, by C. Sturge, xxviii, Buckingham's influence on England's policy with regard to France (from October 1623), by Ella S. Goitein, xxix, Social and economic policy and projects during the Interregnum, by Margaret James, xxx, The attitude of the British Government to the Portuguese revolution of 1826 to 1834, by Phyllis M. Cowell; The Dictionary of National Biography: Corrigenda and Addenda; Migrations of Historical Manuscripts.

Antiquity, vol. i, no. 4, contains:—Algerian hill-forts of to-day, by M. W. Hilton-Simpson; Ithaca, by A. Shewan; The climate of prehistoric Britain, by C. E. P. Brooks; Barrows, by O. G. S. Crawford; The theory of historical cycles, ii, Cycles and progress, by R. G. Collingwood; Notes on the types of English villages and their distribution, by William Page; Air-photographs near Dorchester, Oxon, by O. G. S. Crawford; Prehistoric agriculture; Uisneach; Roman fort at Carisbrooke Castle; Hardknot Castle; Fawler, as place-name, by S. Piggott; Recent work in Crete; Archaeology in Ceylon; The Devil's Arrows, by Admiral Somerville and H. E. Wroot; Ur of the Chaldees.

Journal of the Royal Institute of British Architects, vol. 35, no. 4, includes:—Roman architecture at Jerash, by M. A. Sisson.

The Architectural Review, January 1928, includes:—A history of the English house, by Nathaniel Lloyd.

February 1928, includes:—Border abbeys, the work of a Government Department, by K. Glover; The English house, ii, the Conquest to the end of the twelfth century, by Nathaniel Lloyd.

The Burlington Magazine, December 1927, includes:—Recent acquisitions at the Victoria and Albert Museum: i, plate, by E. Alfred Jones, ii, woodwork, by M. Jourdain; An unknown English medieval chasuble, by Mrs. A. H. Christie; Flamsteed's clocks from Greenwich observatory, by H. Cescinsky.

January 1928, includes:—Notes on Herbert Le Sueur, i, by Geoffrey Webb; The Early stained glass of Canterbury Cathedral, by Bernard Rackham; The hoard of the Kâren Pahlavs, by E. Herzfeld; The Wienhausen embroideries at Berlin, by H. Schmitz.

February 1928, includes:—A Chinese bronze dedicated to the Grand Guardian, by W. P. Yetts; Cracks in Flemish primitives, by E. Renders; Marks and decorative inscriptions on Chinese porcelain, by F. Perzynski, from the Chinese of Hsü Chih Hêng; Notes on Herbert Le Sueur, ii, by Geoffrey Webb; A Byzantine steatite relief, by Stanley Casson.

The Connoisseur, January 1928, includes an article on ancient painted glass at Colchester, by F. S. Eden.

February 1928, includes:—English medieval closing rings, by C. R. Beard; Pewterers' trade-cards, by H. H. Cotterell and A. Heale; The muff and its history, by Mrs. Head.

The Geographical Journal, December 1927, contains the concluding portion of Sir Aurel Stein's paper on Alexander's campaign on the Indian North-West Frontier.

January 1928, includes:—Some surveys and maps of the Elizabethan period remaining in manuscript, by Sir George Fordham.

The Journal of Hellenic Studies, vol. 47, part 2, contains:—Greek

sea-power, 776-540 B.C., and the 'Carian' entry in the Eusebian Thalassocracy List, by A. R. Burn; Missak *Δαρύπος*, by W. M. Calder; A scene from the Anatolian Mysteries, by Sir W. M. Ramsay; The progress of Greek epigraphy, 1925-6, by M. N. Tod; A Greek marble head of a horse, by R. Hinks; Icarus, by J. D. Beazley; Archaeology in Greece, 1926-7, by A. M. Woodward.

Transactions of the Royal Historical Society, 4th series, vol. 10, contains:—National and international co-operation in historical scholarship, by Prof. T. F. Tout; The reign of Henry III: some suggestions, by E. F. Jacob; Illustrations of English history in the medieval registers of the Parlement of Paris, by H. G. Richardson; The diplomatic service under William III, by Miss M. Lane; The reforms at the Exchequer (1232-42), by Miss M. H. Mills; The Duchy of Cornwall: its history and administration, 1640-60, by Miss M. Coate; Some attempts at Imperial co-operation during the reign of Queen Anne, by Prof. W. T. Morgan; The General and Provincial chapters of the English Black monks, 1215-1540, by W. A. Pantin.

The Library, vol. 8, no. 3, contains:—Books and Readers, 1591-4, by G. B. Harrison; The Whitchurch Compartment in London and Mexico, by Lucy Eugenia Osborne; The library regulations of a medieval college [Merton], by H. W. Garrod; Bibliographical notes on some Marston quartos and early collected editions, by R. E. Brettell; The earliest tables of the highways of England and Wales, by Sir H. G. Fordham; Basle ornaments on Paris books, by A. F. Johnson.

Royal Society of Literature: Essays, vol. 7, includes:—Inigo Jones, a modern view, by J. A. Gotch; The miracle play in medieval England, by J. M. Manley.

Man, vol. 27, contains the following papers of archaeological interest:—South African archaeology, by A. J. H. Goodwin; Fresh light on ancient American civilization and calendars, by Mrs. Z. Nuttall; New views on the 'Dawn Man' of Piltdown, by F. Frassetto; The stone battle-axe, by H. Peake and H. J. Fleure; A Bronze Age cup from Wales, by C. E. Vulliamy; Bronze celt from Steeple Fitzpaine in Taunton Castle museum, by H. St. George Gray; Note on a bronze axe-head found at Trefriw, Carnarvonshire, by H. Higgins; Note on proto-neolithic implements from the Chiltern Hills, by C. E. Vulliamy; Further note on the Knole Park settlement, by J. P. T. Burchell; Report on the excavation of a Bronze Age tumulus at Dunstable, Beds., by C. Daryll Forde and G. Elliot Smith; A settlement site of the beaker period at Sana Bay, Ardnamurchan, Argyll, by T. C. Lethbridge; Stonehenge: concerning the sarsens, by Rev. E. H. Goddard, E. H. Stone, and R. C. C. Clay; Fijian round barrows, by A. M. Hocart; The double axe in Etruria, by J. A. Spranger; The excavation of the Five Knolls, Dunstable, by C. Daryll Forde, Cyril Fox, W. J. Hemp, and R. C. C. Clay; Meteoric iron in antiquity, by T. A. Rickard; Stonehenge: concerning the sarsens, by Rev. G. Engleheart.

The Mariner's Mirror, vol. 14, no. 1, contains:—A Phoenician ship of the first century A.D., by Dr. Jules Sottas; European rivalry in the Indian seas, 1600-1700, by C. R. Boxer; The Vice-Admiral and Rear-Admiral of the United Kingdom, by W. G. Perrin; The principal officers of the navy, by A. W. Johns; Report of Pepys's speech in the

House of Commons, 5th March 1668; The Lord Lieutenant of Ireland and his yacht; The cutting down of the *Sovereign* in 1651; Hughes and Suffren; The judges of the High Court of Admiralty; Ship tablets at Leith and Newhaven, N.B.; Chain cables; Commonwealth 'frigates'; The free shipwrights of England; Early two-masted and three-masted ships in England; Some reforms in the Victualling Office.

Papers of the British School at Rome, vol. 10, contains:—Hygieia on Acropolis and Palatine, by B. Ashmole; The relation of the Praetorian camp to Aurelian's wall of Rome, by I. A. Richmond; The Mausoleum of Augustus, by R. A. Cordingley and I. A. Richmond.

The Journal of Egyptian Archaeology, vol. 13, parts 3 and 4, contains:—Head of a monarch of the Tuthmosid house in the British Museum, by H. R. Hall; The Alexandrian coinage of Augustus, by J. G. Milne; Christian Nubia, by J. W. Crowfoot; The Epikrisis record of an Ephebe of Antinoopolis found at Karanis, by A. E. R. Boak; On two mummies formerly belonging to the Duke of Sutherland, by W. R. Dawson; Copper in Ancient Egypt, by A. Lucas; Alexandria, by H. I. Bell; *Μὴν Δρουσιλλῆος*, by A. E. R. Boak; Some philological and other notes, by A. M. Blackman; The Abydos decree of Seti I at Nauri, by F. Ll. Griffith; Preliminary report on the excavations at Tell el-'Amarnah, 1926-7, by H. Frankfort; A parallel to Wilcken, *Chrest.* 144, by W. Schubert and H. I. Bell; An humped bull of ivory, by G. D. Hornblower; Five Greek inscriptions from Nubia, by J. W. Crowfoot; The mathematical leather roll in the British Museum, by S. R. K. Glanville; Some predynastic carvings, by G. D. Hornblower; Bibliography: Greek inscriptions, by M. N. Tod; Bibliography: Christian Egypt, by De L. O'Leary.

Reports of the Associated Architectural Societies, vol. 38, part 1, contains:—Stubton strong room, stray notes (1st series): Heron and Crayle families: endowment of a London hospital, by Lt.-Col. E. Royds; Newton's work, by C. K. Bird; The country-side in Newton's day, by C. H. Turnor; Notes on Acomb, York, by G. Benson; The maltreatment of our parish churches, by Canon H. K. Fry; Old-time lawkeepers, being a study of the constables of Ayleston, co. Leicester, and their accounts, 1671-1710, by M. P. Dare.

Journal of the Royal Institution of Cornwall, vol. 22, contains:—The British village at Carwen, near Blisland, by R. D. Greenaway; Four Cornish folk tales, by R. M. Nance; The Arthurian sculptures on the Porta della Pescheria of Modena cathedral, by H. Jenner; Some notes on churchwardens' account books, by Canon H. R. Jennings; More traditional Cornish numerals, by W. D. Watson; A recent book on the saints of Brittany, by Rev. G. H. Doble; The hurling game, by R. D. Greenaway; Tintagel castle in history and romance, by H. Jenner; The Cassiterides and the ancient trade in tin, by T. A. Rickard; A new-found traditional sentence of Cornish, by R. M. Nance; Palaeologus, by G. F. Tregelles.

Report and Transactions of the Devonshire Association, vol. 58, includes:—Hartland Abbey, by R. P. Chope; Kistvaen and retaining circle, Soussons Common; Report on Manuscripts and Records, by H. Tapley-Soper; Report on Devonshire verbal pronunciations; Orleigh, an ancient house, by W. H. Rogers; Borough, or Burrough, in Northam

and its inhabitants, by Preb. J. F. Chanter; Some literary associations of Celtic and Saxon Devon, by F. A. Perry; North Devon in Elizabethan times, by G. M. Doe; The early history of Bradley manor, near Newton Abbot, by H. R. Watkin; Notes on Membury, by Major W. H. Wilkin; The early boroughs of Devon, by J. J. Alexander; Early arch-priests at Hacombe, by A. W. Searley; A summary of observations on the foreshore of Sidmouth, Devon, by J. Tindall; Swaling: the word and the custom, by C. E. Pike; Some South Devon surnames, by C. F. Rea; A note on Dartmoor place-names, by R. H. Worth.

Vol. 59 includes:—Kistvaen near Fox Tor Mine; Report on church plate of Devon, deaneries of Ipplepen and Tavistock, by Prebendary Chanter; Report on Manuscripts and Records, by H. Tapley-Soper; Report on Devonshire verbal provincialisms; Notes on Membury, part 2, by Major W. H. Wilkin; The history of Ford Abbey, by Rev. C. Sherwin; Old Traine in Modbury: the house and its early owners, by Rev. J. L. E. Hooppell; The earliest southern way from Exeter, by T. J. Joce; Miss Burney in Devonshire, by Miss Ursula Radford; Exeter members of parliament, part i, 1295-1377, by J. J. Alexander; The vicars of Winkleigh since the Commonwealth, by T. Cann Hughes; Barnstaple, Bideford, and Torrington during the Civil War, by I. Rogers; The Blowing house in the parish of Chagford, by R. H. Worth.

Proceedings of the Dorset Natural History and Antiquarian Field Club, vol. 48, contains:—St. Peter's church, Knowle, by G. Dru Drury; West Country bankers (1750-1825), by H. Symonds; Medieval iron fire-backs, by Captain J. E. Acland; Heart burials and some Purbeck marble heart shrines, by G. Dru Drury; The records of the Turnpike trustees of the Wimborne and Cranborne trust, by E. K. Le Fleming; Some Abbotsbury records, by E. H. Tindal Atkinson; Dorset clocks and clockmakers, by Rev. R. G. Bartelot.

Transactions of the Essex Archaeological Society, vol. 19, part 1, contains:—The records of the Archdeaconries of Essex and Colchester, by Rev. W. J. Pressey; Widdington church, by Rev. G. M. Benton; An early Essex subsidy, by R. C. Fowler; Deeds from a parish chest (Writtle), by I. H. Jeayes; Heraldic glass formerly at Bicknacre priory, by Rev. G. M. Benton; The mazer at Holy Trinity, Colchester, by Rev. G. M. Benton; Ramsey Tyrrell's, by J. H. Round; Bocking and Stisted, by J. H. Round; Birchanger church, by W. Chancellor; Springfield church, by W. Chancellor; A hoard of Roman coins, by M. R. Hull; Notes on Roman jewellery found at Lexden, by E. J. Rudsdale; The manor of Borley, by J. F. Nichols; Expenditure on Essex manors, by J. F. Nichols; Pargetting at Colne Ford House; Mustowe, by P. H. Reaney; Thunreslau, by P. H. Reaney; Romano-British temple at Harlow, by R. E. M. Wheeler.

The Essex Review, October 1927, contains:—The parish and church of Chickney, by Rev. F. F. Komlosy; An Essex island parish (Foulness), by E. Brown; John James of Plaistow, by J. J. Holdsworth; Scratch dial on Sandon church, by Rev. G. A. A. Wright.

January 1928, contains:—Arms of the town of Bocking and of the Courtauld family, by A. Hills; The 'Registers' of 1654, by Rev. H. Smith; Danbury Park, Essex, with illustrations by H. Clay; Old Essex bank notes, by C. B. Sworder; In Memoriam: Eliot Howard; The

Bocking theatre, by A. Hills; The Lee family of Chingford, by H. C. Andrews; Foulness, by Rev. H. Smith.

Transactions of the Leicestershire Archaeological Society, vol. 14, part 2, contains:—The extant certificates of Leicester Gilds, with introduction and notes by S. H. Skillington; Notes upon a prehistoric contracted burial discovered at Leire, co. Leic., on 11 December, 1926, by M. P. Dare; Notes on an early sepulchral slab discovered at Ayles-ton church, co. Leic., July 1926, by M. P. Dare; Ragdale Old Hall and Church, by A. Hamilton Thompson, with notes on the manor of Ragdale, by G. F. Farnham; Stoke Golding: i, Architectural notes on the church, by A. Hamilton Thompson, ii, Medieval manorial history, by G. F. Farnham.

Annals of Archaeology and Anthropology, University of Liverpool, vol. 14, nos. 3-4, contains:—*Καρχαλέαι Κόρες*, by M. M. Gillies; Some Caucasian seals, by A. Zakharof; Oxford excavations in Nubia (continued), by F. Ll. Griffith; A Macedonian vase, by R. W. Hutchinson.

Journal of the Manx Museum, December 1927, includes an article on the Knoc y Doonee tumulus, Andreas, by P. M. C. Kermodé.

Norfolk Archaeology, vol. 23, part 1, contains:—Stained and painted glass in the Guildhall, Norwich, by E. A. Kent; Norfolk deeds in the Jackson Collection, Public Reference Library, Norwich, by G. A. Stephen; An early site at Stoke Ferry, by Rev. J. F. Williams; Church plate in Norfolk, deaneries of Brisley and Loddon, by J. H. F. Walter; An ecclesiastical dispute at Westwick, c. 1450, by B. Cozens-Hardy; The Saxon cathedral of Elmham, by A. W. Clapham and W. H. Godfrey; The priory of Horsham St. Faith, by W. R. Rudd; Literature relating to Norfolk archaeology, 1926, by G. A. Stephen; A lost brass at Wells-by-the-Sea, by Walter Rye; Charters of Bondmen, by J. C. Tingey; Birsley church, Easter sepulchre and tiles, by A. Cross; The Oxburgh chalice and paten, by J. H. F. Walter; Watlington church, inscription, by G. G. Coulton; The building of Raynham Hall, by H. L. Bradfer-Lawrence.

Transactions of the North Staffordshire Field Club, vol. 61, includes:—Court Rolls of the Manor of Tunstall; Monumental inscriptions in Madeley church, by B. T. Houghton; Armorial glass at Broughton, by T. Pape.

Sussex Notes and Queries, vol. 1, no. 8, contains:—Ceadwalla's charter and the Hundred of Manwood, by W. D. Peckham; Where was Leonaford? by A. Anscombe; Horsham churchwardens' account book, by R. Garraway Rice; Sussex house of the Friars of the Sack, by L. A. Vidler; Taxpayers of the Hundred of Street in 1550, by Mary S. Holgate; Buckland Bank circus and village site, by E. Curwen and E. C. Curwen; Sussex entries in London Parish Registers, by W. H. Challen; An Anglo-Saxon (?) ring found at Selsey, by E. Heron-Allen; Camomile Fields and Mayfields, by A. Mawer; The Hundred of Typenoak and its tythings, by W. D. Peckham and A. Mawer; Ancient cemetery in Buckland Hole, and Bracken Fen, by E. Curwen and E. C. Curwen; St. Anne's church, Lewes; Wills proved in manor court; Inscription in St. Botolph's church, Bramber, by W. H. Godfrey; A forfeiture deodand; A Gratwick brass in Tortington church.

The Wiltshire Archaeological Magazine, December 1927, includes:—Some eighteenth- and nineteenth-century Wiltshire tokens and a Stonehenge medal in the Society's museum at Devizes, by B. H. Cunnington; The collection of MS. copies of the monumental inscriptions in the churches and churchyards of Wiltshire in the Society's library, by Rev. E. H. Goddard; A Malmesbury abbey manuscript, by Sir Richard H. Luce; The Society's MSS.: abstracts of deeds, &c., of Little Park, Wootton Bassett, by W. Gough; A Roman villa at Nuthills, near Bowood, by the Marquess of Lansdowne.

Proceedings of the Society of Antiquaries of Scotland, vol. 61, contains:—A stone cist and its contents found at Piekie Farm, near Boarhills, Fife, by D. Waterston; Notice of a bronze sword and socketed axe believed to be part of a hoard found when digging the foundations of houses in Grosvenor Crescent, Edinburgh, about the year 1869, by J. E. Cree; Corgarff castle, Aberdeenshire, by W. Douglas Simpson; Notes on flint and other implements found near Selkirk, by J. B. Mason; Crosses and rock sculptures recently discovered in Wigtownshire, by Rev. R. S. G. Anderson; The Capelrig cross, Mearns, Renfrewshire, St. Blane's chapel, Lochearnhead, Perthshire, and a sculptured slab at Kilmaronock, Dumbartonshire, by A. D. Lacaille; The Campbell of Lerags cross at Kilbride, near Oban, with a note on cross-heads of late medieval date in the West Highlands, by J. S. Richardson; Preliminary report on caves containing palaeolithic relics, near Inchnadamph, Sutherland, by J. Graham Callander, J. E. Cree, and J. Ritchie; Some stray inscriptions—1, runes on standing stone at Oykell bridge, 2, on bracket at Gleneagles, 3, on the Kindrochit brooch, 4, the Atholl motto, 5, two carved stones of the Urquharts of Cromarty, by W. M. Mackenzie; Excavation of graves at Ackergill and of an earthhouse at Freswick Links, Caithness, and a description of the discovery of a Viking grave at Reay, Caithness, by A. J. H. Edwards, with a preliminary note on the skeletal remains, by Prof. T. H. Bryce; The caterans of Inveraven, by J. M. Bulloch; Cup-markings near Moulin, Perthshire, by W. W. Naismith; Some antiquities in Benderloch and Lorn, by W. Thomson; Report on the discovery of two short cists containing cremated human remains at Hundatown, Orkney, by W. Kirkness; A symbol stone from Fiscavaig, Skye, an Early Iron Age hoard from Crichtie, Aberdeenshire, and cinerary urns from Seamill, West Kilbride, Ayrshire, by J. Graham Callander; The pre-Reformation endowments of the Magdalen chapel, Cowgate, Edinburgh, by J. Smith; A cist containing burnt human bones at Pitlessie, Culter, Fife, by J. T. Gordon; Note on a stone circle at Melgum Lodge, near Tarland, Aberdeenshire, by W. Douglas Simpson; Notice of a cinerary urn of clay recently discovered on the Cawder estate, near Bishopbriggs, Lanarkshire, by R. L. Bryden; Notes on excavations of prehistoric and later sites at Muirkirk, Ayrshire, 1913-27, by A. Fairbairn; On two Egyptian mummies in the museums at Edinburgh, by W. R. Dawson; Underground galleried building at Rennibister, Orkney, by H. Marwick; On the bones from graves at Ackergill, Caithness, and an underground building at Rennibister, Orkney, by Professor T. H. Bryce; A collection of Tardenoisian implements from Berwickshire, by J. Graham Callander.

The Scottish Historical Review, January 1928, contains:—The Lieutenant-Governor of the Tower in 1745–7, by Henrietta Tayler; Four 'new' medieval Scottish authors, by Professor J. H. Baxter; *The Carolina Merchant*: advice of arrival, by G. P. Insh; The Household of the Chancery, by G. Sayles; Scotland in Orkney, by H. Marwick; A 'Queen Mary' tradition, by Rev. J. Warrick; Scottish visitors to Utrecht, by Professor J. H. Baxter; The date of Bishop Kennedy's death.

Proceedings of the Royal Irish Academy, vol. 37, section C, nos. 11–15, contains: Munster vowels and consonants, by A. Sommerfelt; Some unsolved problems in Irish archaeology, by R. A. S. Macalister; Catalogue of Dean Swift's library in 1715, with an inventory of his personal property in 1742, by T. P. Le Fanu; Unpublished letters from Richard II in Ireland, 1394–5, by E. Curtis; The Vision of Adamnan, by St. John D. Seymour.

Archaeologia Cambrensis, vol. 82, part 2, contains:—Presidential address on the antiquities of Herefordshire, by Dr. E. Hermitage Day; Offa's Dyke: a field survey (2nd report), by Dr. Cyril Fox; Abbey Dore church, Herefordshire, by Roland Paul; The Road books of Wales, by Sir George Fordham; Excavations on the site of the Roman fort at Caerhun, by P. K. Baillie Reynolds; Excavations of the Powysland Club at the Forden Gaer, by F. N. Pryce and T. Davies Pryce; The castle of Deudraeth, by T. E. Morris; The church of Kilpeck, Herefordshire, by Iltud Gardner; Note on the Roman name of Caerleon, by V. E. Nash-Williams; The Caerleon excavations, by V. E. Nash-Williams; Prehistoric remains in Newborough Warren, Anglesey; Celts found at Holyhead; Stone axe-hammer from Pentregar, Llanfyrnach, Pembrokeshire, by V. E. Nash-Williams; Bronze flat celt from Llanfyrnach, Pembrokeshire, by V. E. Nash-Williams; Bronze celt found near Carno, Montgomeryshire, by E. Evans; Glascombe church plate, by G. Eyre Evans; Pembrokeshire church presentments by G. Eyre Evans; Stone circle, Llandrilo in Edeirnion. The number also contains an illustrated report of the Annual Meeting at Hereford in 1927.

Bulletin of the Board of Celtic Studies, vol. 4, part 1, includes:—The riot at Denbigh in 1795—Home Office correspondence, by W. Lloyd Davies; Perforated stone axe-hammers found in Shropshire, by Lily F. Chitty; Current work in Welsh archaeology, by Cyril Fox and others; Coins found at Caerwent, by V. E. Nash-Williams.

Transactions of the Carmarthenshire Antiquarian Society, part 49, includes:—Carmarthen: Portsearcher, A.D. 1630; Mydrim Register; An encrusted urn of the Bronze Age from Penllwyn, near Aberystwyth, by Cyril Fox; Giraldus Cambrensis, by A. L. Congreve; Carmarthen archdeaconry court caveats; Marros church and cross shaft; Meddynfych, Llandeby; the Picton relics; Carmarthen town walls and gates; Carmarthen Corporation protest, A.D. 1753; Captain H. L. Edwardes Gwynne; Spindle whorl from Trelech-ar-Bettws; Morris's Welsh Harbours plans, 1801; John Dyer, poet, 1699–1758; Carmarthenshire hymnists; Dame Letitia Mansel of Trimsaran; Carmarthen and Llanelly custom dues, 1782; Winchester bushel, 1792, in the Society's museum; Mrs. Mary Ravenscroft's will, 1707; Triennial Visitation of

Thomas, bishop of St. Davids, July 1691; Dame Dorothy Mansel of Muddlescombe; Kidwelly town clerk's petition, 1629; Sir Henry Vaughan the elder, 1587?-1660?; Llanfynydd Charity School; Sir Henry Vaughan the younger of Derwydd; M.P.s for Carmarthen borough, 1705-1832; Pembrey parish, early industrial efforts, by R. G. Thomas.

West Wales Historical Records, vol. 12, contains:—The Pembroke-shire Quaker's monthly meeting, by D. Salmon; Marriage bonds of West Wales and Gower; The castle and lordship of Llanstephan: a collection of historical documents from the earliest times to the close of the reign of Henry VIII; Some unpublished letters of Sir Thomas Picton, by E. Edwards; Heraldry in St. Peter's church, Carmarthen, by H. M. Vaughan; Cyny of Weston and Golden, by F. Green; Registers of St. Peter's, Carmarthen: baptisms; Holi'r Pwnc, by J. Ballinger.

The Indian Antiquary, December, 1927, contains:—Jean de Thévenot's account of Surat, by H. G. Rawlinson; The Apabhramsa Stabakas of Rama-Sarman, by Muhammad Shahidullah; Inscription of the time of Maharaja Surapaladeva, dated [Vikrama-]Samvat, 1212, by R. R. Halder; Vedic studies, by A. Venkatasubbiah; Notes on piracy in Eastern waters, by the late S. C. Hill.

January 1928, contains:—Progress of the collection of MSS. at the Dacca University (1926-7), by N. K. Bhattasall; Sources for an account of the embassy of Sir William Norris to Aurangzeb, by Harihar Das; St. Thomas in South India, by P. J. Thomas; Notes on currency and coinage among the Burmese, by Sir R. C. Temple; The Sauraseni and Magadhi Stabakas of Rama-Sarman (Tarkavagisa), by Sir G. A. Grierson.

February 1928, contains:—Folksongs of the Tuluvas, by B. A. Saletore; A possible identification of the Mount Devagiri mentioned in Kalidasa's Meghaduta, by A. S. Bhandarkar; Malabar Miscellany, by T. K. Joseph; Rawal Jaibrasimha of Mewar, by R. R. Halder; Mussulmen: Sultaness, by Sir R. C. Temple; The Aryan Tholos of Malabar, translated by R. Gopalan; The Sauraseni and Magadhi Stabakas of Rama-Sarman (Tarkavagisa), by Sir G. A. Grierson.

Bulletin of the Palestine Museum, Jerusalem, no. 4, contains:—Selected types of Iron Age and Hellenistic pottery, by G. R. Levy.

The American Journal of Archaeology, vol. 31, no. 4, contains:—The church of S. Anastasia in Rome, by P. B. Whitehead; Excavations at Nemea, 1926, by C. W. Blegen; The ΚΛΦΟΣ ΔΙΜΗΝ of the Persians, by J. Day; Excavations at Corinth, 1927, by B. D. Meritt; An Athenian naval catalogue, by B. D. Meritt.

Bulletin of the Museum of Fine Arts, Boston, December 1927, contains:—A dated Buddhist painting from Tun-Huang; A landscape etching by Altdorfer; Early Indian Terra Cottas, by Ananda Coomaraswamy.

Proceedings of the Massachusetts Historical Society, vol. 60, contains:—Early New Englanders in Chancery, by C. E. Banks; William Mullens and Giles Heale, by C. E. Banks; Three Plymouth portraits, by C. K. Bolton; America's debt to Grasse, by F. T. Bowles; The antimonial cup of the seventeenth century, by J. W. Farlow; Note on

antimonial cup, by W. C. Ford; Sumner's letters to Governor Andrew, 1861, by W. C. Ford; French edicts on America, by W. C. Ford; Washington to order, by A. B. Hart; Two letters of Harrison Grey Otis to the Hartford Convention, 1814-15, by S. E. Morison; Contributions of autograph letters, by G. H. Norcross; Samuel Adams and the Sans Souci Club in 1785, by C. Warren; Massachusetts Oratory, by W. Warren.

Old Time New England, January 1928, contains:—Some early American doorways, by C. O. Cornelius; The Humphries house, by Mabel P. Stivers; Ancient carpenter's tools, vii, by H. C. Mercer; The Isaiah Thomas house, Worcester, Mass., by U. W. Cutler.

Wiener Prähistorische Zeitschrift, vol. 14, part 2, contains:—Illyrian archaeology in Tyrol, by G. Merhart; Prehistoric locks, by K. Krieglér; Early Bronze Age cemetery near Scharlinz, by P. Karnitsch; A bronze sword-grip with leaden lining, by H. Michna; Celtic settlements and Roman camps, by E. Nowotny; The Celtic Vindobana, by O. Menghin.

Académie Royale de Belgique: Bulletin de la Commission Royale d'Histoire, vol. 91, bulletin 2, contains: The Conventions of Saint-Quentin, June 1347: a contribution to the history of the first phase of the Thirty Years' War in the Low Countries, by H. Laurent.

Académie Royale de Belgique: Bulletin de la Classe des Lettres, 5th series, vol. 13, no. 6, includes:—The formula 'Parricidas esto' and the origins of criminal jurisdiction in Rome, by F. De Visscher.

Namurcum, 1927, contains:—Glass from the Roman cemetery at Flavion, by F. Courtoy; J. B. Deganhy, a seal engraver of the eighteenth century, by A. Mahieu; A miracle at Houyet in 1759, by F. Rousseau; The Robionys, painters, by J. Breuer; The laboratory and archaeology, by F. Courtoy; Ancient landmarks in the neighbourhood of Philippeville, by H. Pector; The entombment, a fifteenth-century alabaster group, by F. Courtoy; What a silent document teaches [the procedure used in the imposition of seals], by A. Huart; Henri Augustin Michel, a Dinant portrait painter (1775-1811), by V. Delimoy; A Swede at Namur in the eighteenth century; Canons and chaplains at Namur in the eighteenth century, by D. D. Brouwers; A Saxon saucer brooch from Hemptinne, by F. Courtoy; The seals and armorials of the town of Fosses, by A. Huart; A souvenir of the abbey of Salzinnes (remains of a shield of arms from the tomb of abbot Acoz); Namur gentlemen of the seventeenth century, by L. Le Febve de Vivy; A poem in honour of Philippe le Bon, by D. D. Brouwers; The Mont-de-Piété at Namur, by F. Courtoy; The seals and armorials of the commune of Grand-Leez, by A. Huart; An indemnification for war damages in 1797, by F. Courtoy.

Bulletin de la Société nationale des Antiquaires de France, 1927, part 1, contains:—Hoard of Roman coins and ancient jewellery from Bouy, by L. Lacroix; The origin of the elevation of the host, by Mgr. Batiffol; The Maundy Thursday procession to the altars at Notre-Dame, by Mgr. Batiffol; Imitations of coins to serve as gauges for the mesh of fishing-nets, by Canon Urseau and F. Mazerolle; A medieval enamelled candlestick, plaque, mortar, and coins found at

Dompierre, by A. Blanchet; A ninth-century cupola at the abbey of Marmoutiers, by F. Deshoulières; An enamelled terret from Eauze, by E. Michon; Bone objects found at Mont Auxois, by J. Toutain; A Carolingian inscription and other objects from the abbey of Montmajour, by F. Benoît; The name Lilith, by C. Bruston; A miniature of the time of Louis XII, by G. de Maily; The tomb of Hugues des Hazards, by G. de Maily; The swoon of Christ, by G. de Maily; Repairs to the château de Coucy in 1556 and 1557, by M. Roy; A bronze statuette in the museum at Reims, by L. Demaison.

Bulletin Monumental, vol. 87, no. 3-4, contains:—The origin of the Christian basilica, by L. Bréhier; Remains of the eleventh-century cathedral at Rouen, by John Bilson; Romanesque churches in the neighbourhood of Vitry-le-François, by R. Crozet; Woodwork from Gaillon in the Musée de Cluny, by J. Marquet de Vasselot; Allegorical paintings from the Maison Philandrier at Châtillon-sur-Seine, by M. Deshoulières; Wall paintings in the church of Saulcet, by M. Géniermont; A peculiarity in the church of Notre-Dame du Port at Clermont-Ferrand, by G. Guët.

L'Homme Préhistorique, Septembre-Octobre 1927, nos. 9, 10.—Rounded flints, evidently shaped by man, of different sizes, are known from most periods of the Stone Age, but have been variously explained. Specimens dating between Le Moustier and Aurignac are described and figured from Les Festons near Brantôme in the Dordogne, and the theory preferred is that they were used for slinging. The skull found by Mr. Turville-Petre near the Sea of Galilee is briefly discussed; and a useful summary is given of Erik Westerby's Danish work on prehistoric sites of the Mesolithic period at Bloksbjerg near Klampenborg, including general remarks on the Maglemose period in Europe, here equated with the earliest phase of Tardenois. The Bourdil dolmen near Issigeac in the Dordogne produced a pair of transverse arrow-heads (*petits tranchets*); and traces of former iron-workings in the forest of Othe are recorded.

Novembre 1927, no. 11.—M. Vayson de Pradenne's attack on the Glozel finds has since been reinforced by the Committee's finding, and is lively reading. M. Léon Coutil continues his study of Bronze Age daggers, rapiers, and swords, with remarks on halbert-blades, accompanied by three plates of the principal types. MM. Hamal-Nandrin and Servais conclude, from the excavation of 496 pit-dwellings, that the Omal industry preceded that of Robenhausen. It seems to be confined to the Hesbaye province of Belgium.

Revue Anthropologique, Octobre-Décembre 1927, nos. 10-12 (Émile Nourry, Paris). There is a short paper on the sepulchral cave of Quérénas (Ariège) and its human remains, dating from the late Neolithic or even the Eneolithic period, with transverse arrow-heads; and brachycephaly is proved locally anterior to the Megalithic period. The first part of a treatise on the prehistory of Châteaudun (Eure-et-Loir) has inferior illustrations of flints, with sites and dates somewhat mixed, and the half-tone figures are not successful. But the number is memorable for the supplement, which consists of the International Committee's Report on the excavations at Glozel, near Vichy. The committee was nominated by the International Institute of Anthro-

pology at a meeting in Amsterdam last September, and comprised the following well-known names: Bosch Gimpera, Abbé Favret, Forrer, Miss Dorothy Garrod, Hamal-Nandrin, Peyrony, and Pittard. Their unanimous verdict was that the Glozel finds were as a whole not antiquities; and M. Peyrony, who had formerly regarded them as authentic, publishes a recantation.

Aréthuse, Octobre 1927, contains:—A hoard of Roman coins from Cesarea in Cappadocia, by A. Baldwin; Lead seals of the Grand-Ducal period of the Ukraine, by N. Makarenko; A plaquette by Moderno, by E. Cordonnier.

Bulletin historique de la Société des Antiquaires de la Morinie, nos. 272 and 274, contain:—The ancient Government hall at Saint-Omer: The hôtel of the Comtesse de Fruges, by J. de Pas; A journey to Saint-Omer in 1760, by J. de Pas; Contract for the construction of the drums of the transept of Saint-Omer cathedral in 1758, by J. Decroos; Refuges in the environs of Saint-Omer in the sixteenth century, by J. de Pas; Eighteenth-century descriptions of the mausoleum of Guillaume Fillastre, by J. de Pas.

Bulletin de la Société des Antiquaires de Picardie, 1927, part 1, contains:—Inscribed stone found on the site of the convent of the Saintes Maries or the Visitation at Amiens, by Mgr. F. Mantel; Finds in excavations at Amiens in 1925-6, by E. Bienaimé.

Mannus, vol. 19, contains:—The question of style and the chronological problems of the Migration period, by N. Åberg; Palaeolithic finds in Westphalia, by J. Andree; New classification of human history, by J. Bayer; The mammoth stone from Kumilsko, by J. Bayer; Stone Age finds at Stassfurt, by A. Becker; A cremation burial of the later Roman Empire at Gundorf near Leipzig, by K. Braune; Isolated mesolithic finds in Central Germany, by Dr. Florschütz; Early Norse religious history, by L. Franz; The position of research into the pre-history of the Oberlausitz, by W. Frenzel; Colouring of prehistoric pottery, by F. Fuhle; The stone find near Leese and its relation to the Angrivarian frontier wall, by G. Heimbs; The origin of the chip-carving motive in Hallstatt pottery, by W. A. Jenny; The settlement of the Teutoburger Wald in 1850 B.C., by G. Kossina; An urn-field near Hamm in Westphalia, by A. Krebs; The introduction of the Rössen style into Brunswick, by O. Krone; The beginnings of pottery down to the introduction of the potter's wheel, by F. Langer; Prehistoric settlements in Posen, by G. E. Maas; Celtic swords with knobbed hilt, by O. Richter and M. Jahn; Supposed old German astronomical stations in the Teutoburger Wald, by W. Schultz; The discovery of an astronomical station in Oesterholz, by W. Teudt.

Mannus, Supplementary volume 5, contains:—History of the peopling of Middle Germany from the later Stone Age to the destruction of the Thuringian kingdom, by W. Schultz; New excavations in Rügen, by S. Klinghardt; The Giant's Grave culture in North-west Germany, by H. Gummel; The importance of the East Central European spheres of culture on the Bronze and Early Iron Ages of South Germany, by G. Kraft; The Northern groups of Urn-field culture, by R. Stampfulz; The people between the Sieg, Wupper, and Rhine in the Hallstatt period, by C. Rademacher; Preliminary report on new finds of the Imperial

age in Pomerania, by O. Kunkel; Balder, the Oseberg burial and South Russian-Scythian parallels, by W. Schultz; The western limit of the Slav frontier wall in North and Central Germany, by C. Albrecht; The Bitterfeld Circle in prehistoric and early historic times, by O. F. Gandert; Art and Culture of the Iberians, by H. Kühn; Prehistoric research in Brunswick, by Dr. Fuhse; The geology of the Elm, by A. Kumm; The 'ribbon-ware' settlements in Brunswick, by O. Krone; Old roads in the Elm, by O. Hahne; Prehistoric and early historic earthworks on the Heeseberg, the Oder, and the Reitling valley, by H. Lühmann.

Bonner Jahrbücher, Heft 132, contains:—The development of the Ursula Legend, by W. Levison; The locality of the battle near Trier in the Batavian war of 70 B.C., by E. Sadée; Altars of the Matronae Audrinehae and other stone monuments, by H. J. Lückger; Prototypes of small Rhenish churches, by R. Schwarz; The representation of buildings on medieval coins, by F. Philippi; A Carolingian pottery oven near Wildenrath, by F. Rademacher; The coin find at Erpel in 1689, by P. Kalenberg.

Ἀρχαιολογικὸν Δελτίον, vol. 9, contains:—Eleusinian vessels, by S. Papaspyride; A Middle Minoan house at Lower Messara, by S. N. Marinatos; An inscription to Britomarpis from Chersonese, Crete, by S. N. Marinatos; A classical head in the Museum at Volo, by Ch. Karouzos; Inscriptions from Samos, by B. Theophanides; A statue of Asclepius from Eleusis, by K. Kourouniotes; Inscriptions from Ephesus, by F. Milner; The type of the Medici Athene, by S. Pelekides; The youth of Marathon (statue), by K. Romaïos; Well head from the Museum of Heracleia, by A. K. Orlandos; A seal from Daphnis, by A. K. Orlandos (the inscription should clearly be extended C(ontra) S(igillum) Abbatis D(e) Firmitate (=Ferté), and not as suggested in the article); Report of the Eighth Archaeological Congress, by K. A. Romaïos; The Tenth Archaeological Congress, by S. Marinatos; Excavations in Lower Goumenitsa, by N. Kyparisses; New accessions to the Ethnic Museum, by P. Kastriotes; On the excavation of Kalybian Brastina, by S. Pelekides; The Twelfth Archaeological Congress: (i) Excavations in Lesbos, (ii) Topographical and other antiquities from Mytilene, by A. Euangelides; Excavations at Molycra in Aetolia, by A. K. Orlandos; The superintendence of Byzantine antiquities in Macedonia, by A. Zygopoulos; The excavation of the Royal stables at Athens, by N. Kyparisses.

Notizie degli Scavi, ser. vi, vol. iii, fasc. 1-3 (1927).—Pompeii: Report on the excavations from March 1924 to March 1926, by A. Maiuri. Description of houses and shops in Insula VII (Reg. I) on the Via dell' Abbondanza, with an important 'ara compitalis' at the point where the vicus separating this Insula from the next meets the Via. In one of the houses several skeletons were found, and a wall-painting (perhaps first half of the first century B.C.) of a battle, the name Spartac(us) being inscribed in Oscan characters over the head of one of the warriors. In the triclinium are typical but remarkable Pompeian paintings of Hercules in the garden of the Hesperides, the fall of Icarus, Perseus and Andromeda, and Polyphemus and Galatea (pls. I-III). The 'House of the Bronze Ephebus' seems to have been made out of two. Among

the wall-paintings in the numerous rooms are the rare subject of Perseus showing Andromeda the head of Medusa reflected in a pool, Apollo admiring Daphne, and Narcissus with a nymph. The triclinium has a remarkable pavement of opus sectile, with a central panel of elaborate design in coloured marbles and vitreous pastes. It was found protected by a mat of lead, which would be removed when entertainments were given. The walls were painted in the latest Pompeian style, one of the subjects being Menelaus seizing Helen on the capture of Troy. In the portico leading to the garden was an elegant painted shrine, and in the garden itself a summer triclinium, with pillars at the angles to support a vine-pergola, and a nymphaeum at the back. On a pedestal against one of the front pillars perhaps stood the bronze 'Ephebus lampadophorus' which has given its name to the house. On the inner face of the podium of the triclinium is a remarkable set of painted scenes of the inundation of the Nile (pls. VII-IX, figs. 25-8). The life-size gilt bronze Ephebus 'lychnophorus' (cf. Lucretius ii, 24 ff.) is one of the most important artistic objects discovered in Pompeii. It was found in 1925, wrapped in some kind of stuff, between the atrium and triclinium; and had probably been hastily removed from the garden and placed under cover at the moment of the catastrophe. Four small bronze figures perhaps held dishes on the triclinium table. A well-preserved bronze nude warrior seems to be a slinger; perhaps Rhodian work of the third-second centuries B.C. A fountain statuette of a nymph holding a large shell full of fruit perhaps belonged to the nymphaeum, but was not found in place. The marbles include a statuette of Pan, and a small group of a doe suckling its fawn, both originally gilt. In the kitchen was a fine bronze amphora, and in the principal 'apotheca', with many other bronze objects, a remarkable crater on a stem and square base. In one triclinium were several bronze parts of the couches, including the life-like head of a mule. An excursus by L. Jacomo discusses the 'cochlea' for raising water (invented by Archimedes, and described by Vitruvius), represented in one of the Nile scenes in the garden triclinium. M. Della Corte publishes the epigraphic material from the Via dell'Abbondanza, among which are the usual election appeals; three appropriate distichs addressed to the guests, painted on the walls of the garden triclinium described above; part of an 'index nundinarius' showing when and where markets were held in October and November; and two sets of popular verses in cursive characters.

Fasc. 4-6 (1927).—Riva di Trento, prehistoric stronghold on the Colle di S. Bartolomeo, early pottery, flint and bone implements, fortifications, comparison with similar sites in the district, by P. Marconi; Comacchio, descriptive catalogue of the contents of a large number of graves from the Etruscan cemetery in the Valle Trebba, especially important figured vases (eight plates besides figures in the text), by A. Negrioli; Florence, archaeological discoveries (buildings, sculpture, &c.) of minor importance made in laying telephone wires in different parts of the city, by E. Gasperi-Campani; Orbetello, various objects and remains found on the site of a Roman villa of the early Imperial age, and the contents of two Etruscan tombs (fifth century B.C.), by P. Ravaggi; Port' Ercole (the ancient Portus Herculis), three graves

of the second century A.D., by the same; Tivoli, inventory of some of the objects found in a 'fossa votiva' in the district called Acquoria, on the left bank of the Anio, perhaps connected with the shrine of some water deity, by U. Antonielli; the coins (all Republican) described by S. L. Cesano; Sardinia, epitaph from the site of the ancient Calagonis of a presbyter Johannes (fourth or fifth century) with remains of an inscription on the other side recording a restoration of the *Thermae Rufanae* by an Imperial procurator under Severus, by A. Taramelli.

Fasc. 7-9.—Aquileia, account of a number of Roman mosaics (decorative designs, mostly first century A.D.) recently discovered, with discussion of their style and technique, and drawing attention to the importance of the site of Aquileia as a field for the study of mosaics, by G. Brusin; Florence, inscribed cippus of the burial ground of a gild (*Cultores Larum*) of slaves or freedmen of Q. Terentius Lascivus, by A. Minto; Pitigliano, prehistoric pot with raised marks suggesting letters, by the same; Perugia, a bronze sword, and some Etruscan inscribed cippi, one being sculptured with a unique representation of a lady taking leave of the world at the door of the tomb attended by musicians and two Lases, by U. Calzoni; Rieti, remains of buildings, &c., near the Palazzo Comunale, by R. Paribeni; Rome, the fragments of the dedicatory inscription of the Temple of Castor in the Forum, by A. Bartoli; Grottarossa (Via Flaminia), a family tomb with painted decorations and epitaph of Fadilla (second century A.D.), by G. Bendinelli; Mondragone (Sinuessa), a Greek marble relief of the Eleusinian deities (c. 370-60 B.C.), by P. Mingazzini. Pozzuoli: among various recent discoveries recorded by A. Maiuri are—a paved road with its curbs, and part of a *clivus* interrupted by flights of steps, as often in modern Pozzuoli; part of a medallion bust framed in laurel, probably from some public building; remains of large buildings not far from the *Thermae* ('Tempio di Nettuno') and probably connected with them; excavation of an entrance to the Amphitheatre, with fragments of repetitions of the dedicatory inscription, two of which were already known, an inscription of Trajan, and a dedication by the *navicularii*; an important sepulchral crypt with fine stucco decorations, mostly symbolical marine subjects; an untouched Canopic vase of Oriental alabaster from the cemetery of the Egyptian colony; various epitaphs. South Italy, minor discoveries, the most notable being those at Tiriolo throwing some light on the ancient inhabitants and culture of Lucania and Bruttium, with an account of the objects collected in the Museum at Catanzaro, by S. Ferri; Gerace Marina (Locri), bronze helmet (age of Hannibal), by the same. Sardinia, Arbus, a tomb of characteristic form, used by successive populations, and two unpublished menhirs, by A. Taramelli.

Rendiconti della R. Accademia Nazionale dei Lincei, ser. vi, vol. iii, fasc. 1, 2 (Jan.-Feb. 1927).—Studies in the poetry of al-Mutanabbi, by F. Gabrieli; Memoir of F. Schupfer (1833-1925), Professor of the History of Italian Law at Rome from 1878, by F. Brandileone; a long and detailed account of the contributions of E. Lattes (1843-1925) to the study of the Etruscan problem and language, by L. Ceci; Memoir of R. Eucken (d. 1926), by F. Orestano; Criticism of P. Kretschmer's theory that the words *amor*, *pulcher*, *populus*, are of Etruscan origin, by

L. Ceci; Documents relating to the caliphate of al-Amin in at-Tabari, by F. Gabrieli.

Atti e Memorie della Società Tiburtina, vol. 7, nos. 3-4, contains:—The Via Tiburtina, by T. Ashby; A new list of bishops of Tivoli, by G. Cascioli; The feudal reception in the seventeenth century: the entry of Frederick III to Montecelio in 1631, by C. Piccolini; Tivoli from 1595 to 1744 from Lolli's history; Seventeenth-century dinners and suppers.

Notiziario Archeologico, vol. 4, contains:—The rediscovery of the stela of Augustus at Cyrene, by G. Oliverio; The Aphrodites B and C of Cyrene, by S. Ferri; A Satyr with the infant Dionysus, by E. Ghislanzoni; The *Lex Cathartica* of Cyrene, by S. Ferri; The sanctuary of the Alexandrine divinites, by E. Ghislanzoni; Two fragments of hymns to Isis, by G. Oliviero; The fountain of Apollo, by G. Oliviero.

Fornvännen: Meddelanden från K. Vitterhets Historie och Antikvitets Akademien, 1927, häfte 5 (Stockholm). Erik Floderus discusses a building in Sigtuna with plan recalling North Elmham, perhaps a gild church, which yielded stone carvings showing English influence of the early middle ages. Sune Lindqvist replies at length to Nils Åberg's paper in *Fornvännen*, 1926, 117, on publications by the former dealing with questions of style and chronology in the Migration period.

Häfte 6. Two reliquaries found in the ruined church of Ignaberga are described by Bengt Thordeman, the contents consisting of a bone splinter, silk fabric, and parchment, and dating about 1300. Sune Lindqvist discourses on the largest box-brooch ever found (at Västergårda, Sundre, Gotland), of bronze, silver, and gold in the style of 1000-1050. Occasion is taken to figure other specimens of the same period, the improved technique being attributed to English influence. A Bronze Age barrow on the island of Öland, described by K.-A. Gustawsson, once contained a primary cist with an unburnt burial, but the bronze sword and tweezers figured came from secondary burials after cremation; and the sword may have belonged to the Danish sphere of influence. Olov Janse has a note on the chronology of a bulbous brooch-type in Gotland, dating it earlier than Montelius. A number of reviews completes the annual volume.

Meddelanden från Östergötlands Fornminnes- och Museiförening, 1927-8, includes:—Östergötland Romanesque churches, by E. Lundberg; A study of mass vestments and altar furniture, by S. Dahlquist; Cist graves in V. Ny, by B. Cnattingius.

Basler Zeitschrift, vol. 16, contains:—Industries in the 'Pool' of Little Basle, by E. Schweizer; The bishopric of Basle during the Great Schism, 1378-1415, by K. Schönenberger; An unknown letter of Thomas Platter, by J. Wackernagel; Swiss historical writings in the eighteenth century and the national idea, by K. Schwärker; Basle manuscripts: Notices of, and extracts from, the older Latin manuscripts, by G. Morin; Is the Clematius inscription a forgery? by P. Lehmann.

Hespéris, vol. 7, no. 2, contains:—Almohad sanctuaries and fortresses: The ribat of Tit. Le Tasghimont, by H. Basset and H. Terrasse; The Berber dialect of the Rif, by E. Laoust; The Hand of Fatima, by J. Herber; The cryptographic system of Sultan Ahmad al-Mansur,

by G. S. Colin; The Atlantic coast of Morocco at the beginning of the sixteenth century according to the Portuguese navigation instructions, by R. Ricard.

Bibliography

Books only are included. Those marked * are in the Library of the
Society of Antiquaries.

Aegean Archaeology.

- *Alt-Ithaka; ein Beitrag zur Homer-Frage. Studien und Ausgrabungen auf der Insel Leukas-Ithaka von Wilhelm Dörpfeld. Unter Mitarbeit von Peter Goessler, Ernst van Helle, Wilfried von Seidlitz, Richard Uhde. In two volumes. 10 $\frac{3}{4}$ x 8. Pp. xv + 399; 401-442, with 89 plates of illustrations and 20 of maps and plans. Munich: Richard Uhde, 1927.
- *Hellenistic Civilisation. By W. W. Tarn. 8 $\frac{1}{2}$ x 5 $\frac{1}{2}$. Pp. viii + 312. London: Arnold, 1927. 16s.
- *Reading University Studies. Sixth and fifth century pottery from excavations made at Rhitsona by R. M. Burrows in 1909 and by P. N. Ure and A. D. Ure in 1921 and 1922. Edited by P. N. Ure. 11 x 7 $\frac{1}{4}$. Pp. ix + 111, with 25 plates. Oxford University Press, 1927.
- *A Cretan Statuette in the Fitzwilliam Museum. A study in Minoan costume. By A. J. B. Wace. 11 $\frac{1}{4}$ x 8 $\frac{1}{2}$. Pp. ix + 49. Cambridge: at the University Press, 1927. 10s. 6d.

Anglo-Saxon Archaeology.

- *English Ornament in the Seventh and Eighth Centuries. By C. R. Peers. 9 $\frac{3}{4}$ x 6. Pp. 12. London: Milford, for the British Academy, 1928. 1s.

Archaeology: General.

- *Dictionnaire d'Archéologie Chrétienne et de Liturgie. Publié sous la direction du R^me Dom Fernand Cabrol et de Dom Henri Leclercq. Fasc. lxxviii-lxxix, Jérusalem—Jubilus; fasc. lxxx-lxxxi, Judaïsme—Justinian. 11 $\frac{1}{4}$ x 7 $\frac{3}{4}$. Columns 2353-2780; 1-576. Paris: Lelouzey, 1927.
- *Victoria and Albert Museum. Review of the Principal Acquisitions during the year 1925. 9 $\frac{3}{4}$ x 7 $\frac{1}{4}$. Pp. xiv + 95. London: Stationery Office, 1927. 6s.
- *Borough of Colchester. Report of the Museum and Muniment Committee for the year ended 31st March, 1927. 8 $\frac{3}{4}$ x 5 $\frac{1}{2}$. Pp. 40. 6d.
- *Malta. Annual Report on the working of the Museum Department during 1926-27. 12 $\frac{1}{4}$ x 8 $\frac{3}{4}$. Pp. xv. Malta: Government Printing Office, 1927.
- *Les Trésors du Cabinet des Antiques. Choix de Bronzes de la Collection Caylus donnée au roi en 1762. Par Jean Babelon. 13 x 9 $\frac{3}{4}$. Pp. 59. Paris and Brussels: Van Oest, 1928.

Architecture.

- *The Architecture of Ancient Greece. An account of its historic development: being the first part of The Architecture of Greece and Rome, by William J. Anderson and R. Phené Spiers. Revised and rewritten by William Bell Dinsmore. 9 x 6. Pp. xi + 241. London: Batsford, 1927. 21s.
- *The Architecture of Ancient Rome. An account of its historic development: being the second part of The Architecture of Greece and Rome, by William J. Anderson and R. Phené Spiers. Revised and rewritten by Thomas Ashby. 9 x 6. Pp. xiii + 202. London: Batsford, 1927. 21s.
- *The Architecture of the Renaissance in France. A history of the evolution of the arts of building, decoration, and garden design under classical influence from 1495 to 1830. By W. H. Ward. In two volumes. Second edition, revised. 9 x 6. Pp. xxvi + 266 ff.; xiv + 267-533. London: Batsford, 1927. 21s. each volume.

- *The Architecture of the Renaissance in Italy: a general view for the use of students and others. By William J. Anderson. Fifth edition, revised and enlarged by Arthur Stratton. 9 x 6. Pp. xi + 316. London: Batsford, 1927. 21s.
- *A List of Norman tympana and lintels with figure or symbolical sculpture still or till recently existing in the churches of Great Britain. By Charles E. Keyser. Second edition, revised and enlarged. 11½ x 9. Pp. lxxxiv + 80. London: Elliot Stock, 1927.
- *Les Châteaux de la Renaissance. Par François Gebelin. 13 x 10. Pp. 306. Paris: Les Beaux-Arts, 1927.

Assyriology.

- *Letters and Transactions from Cappadocia. By Albert T. Clay. 11½ x 8½. Pp. 28, with 85 plates. New Haven: Yale University Press; London: Milford, 1927.

Bells.

- *The Church Bells of Wiltshire, their inscriptions and history, arranged alphabetically by Parishes. Part I (Aldbourne-Buttermere). By H. B. Walters. 9 x 5½. Pp. 44. Issued with the *Wiltshire Archaeological Magazine*, December 1927. 2s.

Biography.

- *The Dictionary of National Biography, 1912-1921. Edited by H. W. C. Davis and J. R. H. Weaver. 9 x 6. Pp. xxvi + 623. Oxford University Press, 1927. 21s.

Earthworks.

- *Ancient earthworks of Latvia (in Lettish). By E. Brastinsch. 11½ x 8½. Pp. 104. Riga, 1926.

Egyptology.

- *Catalogue of the Egyptian Hieroglyphic printing type from matrices owned and controlled by Dr. Alan H. Gardiner. 12½ x 9½. Pp. 45. Oxford: at the University Press, 1928.
- *Documents pour servir à l'étude de l'art égyptien. I. Préface et Texte, par Jean Capart. 15½ x 11. Pp. xvi + 89, with 100 plates. Paris: Éditions du Pégase, 1927. £6 6s.
- *Egypt and the Isle of Wight. By Rendel Harris. Woodbrooke Essays, no. 12. 9½ x 6½. Pp. 12. Cambridge: Heffer, 1927. 1s.
- *The Oxyrhynchus Papyri, part xvii. Edited, with translations and notes, by Arthur S. Hunt. 10 x 7½. Pp. xv + 313. London: Egyptian Exploration Society, 1927. £2 2s.

Engraving.

- *Handbuch der Holz- und Metallschnitte des XV. Jahrhunderts. Von W. L. Schreiber. Band IV. 12 x 9½. Pp. xii + 160. Leipzig: Hiersemann, 1927.

Glass.

- *The Painted Glass of York. An account of the medieval glass of the Minster and parish churches. By the Rev. F. Harrison, with a preface by the Very Reverend W. Foxley Norris. 8½ x 5½. Pp. xvi + 253. London: S.P.C.K., 1927. 12s. 6d.
- *The Glasshouses of Dudley and Worcester. By F. Buckley. 8½ x 5½. Pp. 287-293. Reprint *Trans. Soc. of Glass Technology*, vol. 11, 1927.

History and Topography.

- *A History of the Jukes Family of Cound, Shropshire, and their descendants. By Percy W. L. Adams. 8½ x 5½. Pp. xiii + 90. Printed by Eardley, Tunstall, 1927.

- *A Parliamentary History of the ancient borough of Horsham, 1295-1885, with some account of every contested election, and, as far as can be ascertained, a list of members returned. By William Albery, with an introduction by Hilaire Belloc. 10 x 7 $\frac{1}{2}$. Pp. xvi + 557. London: Longmans, 1927.
- *Massachusetts Privateers of the Revolution. By Gardner Wild Allen. 9 $\frac{1}{2}$ x 7. Pp. vi + 356. Massachusetts Historical Society Collections, vol. 77. 1927.
- *Stanton and Snowhill, Gloucestershire. By E. A. B. Barnard. 7 $\frac{1}{2}$ x 5. Pp. vii + 122. Cambridge: printed at the University Press, 1927.
- *Old Bromsgrove. The strange adventures of John Lynold, 1611-1619. By E. A. B. Barnard. 6 $\frac{1}{2}$ x 4. Pp. 31. Bromsgrove: printed at the 'Messenger' Office, 1927.
- *Henry Adams of Somersetshire, England, and Braintree, Mass. His English ancestry and some of his descendants. Compiled by J. Gardner Bartlett for Edward Dean Adams. 9 $\frac{1}{2}$ x 6. Pp. xv + 170. Privately printed. New York, 1927.
- *Essex Sokens and other parishes in the Tendring Hundred. Stories of the Past. By W. Gurney Benham. 7 $\frac{1}{2}$ x 4 $\frac{1}{2}$. Pp. iv + 62. Colchester: Benham & Co., 1928. 2s.
- *The portrait of Sir John Soane, R.A. (1753-1837): set forth in letters from his friends (1775-1837). Edited by Arthur T. Bolton, F.S.A., F.R.I.B.A. 8 $\frac{1}{2}$ x 5 $\frac{1}{2}$. Pp. xxvi + 550. London: Sir John Soane's Museum, 1927. 16s.
- *Storia di Tivoli di Marco Antonio Nicodemi a cura di Amedeo Bussi e Vincenzo Pacifici. 10 x 7. Pp. xxiii + 239. Tivoli: Società Tiburtina, 1926.
- *Gli uomini illustri o degni di memoria della Città di Tivoli dalla sua origine ai nostri giorni. Per Mons. Giuseppe Cascioli. In two parts. 10 x 7. Pp. vii + 124; 125-348. Tivoli: Società Tiburtina, 1927.
- *The Bull Inn at Long Melford. By Miller Christy. 10 $\frac{3}{4}$ x 7 $\frac{1}{2}$. Pp. 16. London: Trust Houses, 1927. 2s.
- *Notes from the Transcripts and Registers of Appledore, Kent. By F. William Cock. 8 $\frac{1}{2}$ x 6 $\frac{1}{2}$. Pp. 17. n.p. 1927.
- *Notes on Windlesham Parish Church. By John Cree. 8 $\frac{1}{2}$ x 5 $\frac{1}{2}$. Pp. vii + 117. Camberley: Hickmott & Co., 1927.
- *Essays in History presented to Reginald Lane Poole. Edited by H. W. C. Davis. 9 x 5 $\frac{1}{2}$. Pp. xv + 483. Oxford: at the Clarendon Press, 1927.
- *Oxford Studies in Social and Legal History, edited by the late Sir Paul Vinogradoff. Vol. ix. The social structure of medieval East Anglia. By David C. Douglas. 8 $\frac{1}{2}$ x 5 $\frac{1}{2}$. Pp. xii + 288. Oxford: at the Clarendon Press, 1927. 18s.
- *La Vigne en Picardie et le Commerce des Vins de Somme. Par H. Duchaussoy. 9 x 5 $\frac{1}{2}$. Pp. xiv + 534. Mémoires de la Société des Antiquaires de Picardie, Tome xli. Amiens, 1926.
- *Pedigrees of the Families of Jay and Osborne. Put together by Prince Frederick Duleep Singh and edited by Mr. Everard Green, Somerset Herald, and Mr. W. B. Lindsay, Clarenceux King of Arms. 6 $\frac{1}{2}$ x 4 $\frac{1}{2}$. Pp. 15. n.p., n.d.
- *An Oxford Hall in medieval times, being the early history of St. Edmund Hall. By Alfred B. Emden. 8 $\frac{1}{2}$ x 5 $\frac{1}{2}$. Pp. xvi + 320. Oxford: at the Clarendon Press, 1927. 16s.
- *Froissarts Cronycles. Translated out of the French by Sir John Bouchier Lord Berners. Vol. I, parts 1, 2, 3. 9 $\frac{1}{2}$ x 6 $\frac{1}{2}$. Pp. vii + xxvi + 311; 313-658; 659-1022. Printed at the Shakespeare Head Press, Stratford-upon-Avon, and published for the Press by Basil Blackwell, Oxford, 1927. To be completed in 8 vols. 25 guineas the set.
- *The Ancient Usages of the City of Winchester. From the Anglo-French version preserved in Winchester College. By J. S. Furley, with glossary by E. W. Patchett. 8 $\frac{1}{2}$ x 5 $\frac{1}{2}$. Pp. v + 68. Oxford: at the Clarendon Press, 1927. 7s. 6d.
- *The Royal Hospital, Chelsea, being the eleventh volume of the Survey of London, by Walter H. Godfrey. 11 $\frac{1}{2}$ x 9. Pp. xx + 134, with 102 plates. London: Batsford, for the London County Council, 1927.
- *St. Winifred. By Rendel Harris. Woodbrooke Essays, no. 13. 9 $\frac{1}{2}$ x 6. Pp. 12. Cambridge: Heffer, 1927. 1s.
- *Register of the Freemen of Leicester, 1196-1700, including the apprentices sworn before successive mayors for certain periods, 1646-1770. Abstracted from

- the Borough Records and edited by Henry Hartopp. $9\frac{1}{2} \times 6\frac{1}{2}$. Pp. xlviii + 620. Leicester: Backus, 1927. £1 17s. 6d.
- *A History of Hitchin. By Reginald L. Hine. Vol. i. $9\frac{1}{2} \times 6\frac{1}{2}$. Pp. 375. London: Allen & Unwin, 1927. 16s.
- *La Chronique de Jean de Hocsem: nouvelle édition publiée par Godefroid Kurth. 10 x 6 $\frac{1}{2}$. Pp. lxxv + 445. Brussels: Commission royale d'histoire, 1927.
- *Thomas Chippendale: a review of his life and origin. By Edwin J. Layton. 11 x 8 $\frac{1}{2}$. Pp. xv + 61. London: Murray, 1928. 10s. 6d.
- *The Account Book of a Kentish Estate, 1616-1704. Edited by Eleanor C. Lodge. $9\frac{1}{2} \times 6\frac{1}{2}$. Pp. xlviii + 532. London: Milford, for the British Academy, 1927. 31s. 6d.
- *Travels of Fray Sebastian Manrique, 1629-1643. A translation of the *Itinerario de las misiones orientales*, with introduction and notes by Lt.-Col. C. Eckford Luard, assisted by Father H. Hosten, S.J. In two volumes: vol. i, Arakan. $8\frac{1}{2} \times 5\frac{1}{2}$. Pp. lxvii + 450. Publications of the Hakluyt Society, vol. lix. Oxford: printed for the Hakluyt Society, 1927.
- *A History of the University of Oxford. By Charles Edward Malet. Volume iii, Modern Oxford. $8\frac{1}{2} \times 5\frac{1}{2}$. Pp. xxiii + 530. London: Methuen, 1927. 21s.
- *Documents Hebraïcs de Jueus Catalans. Par J. Millàs i Vallicrosa. 11 x 8 $\frac{1}{2}$. Pp. 107. Mémoires de l'Institut d'Estudis Catalans, vol. i, fasc. 3. Brussels, 1927.
- *Notes pour servir à la Statistique Féodale dans l'étendue de l'ancien Bailliage et de l'Arrondissement de Saint-Omer. Par Justin de Pas. Tome second, N-Z. Supplément et Tables. 9 x 5 $\frac{1}{2}$. Pp. viii + 549-992. Mémoires de la Société des Antiquaires de la Morinie, tome xxxiv. Saint-Omer, 1926.
- *The Great Roll of the Pipe for the fifth year of the reign of King Richard the First, Michaelmas 1193 (Pipe Roll 39). Edited by Doris M. Stenton. $9\frac{1}{2} \times 6$. Pp. xxx + 257. Publications of the Pipe Roll Society, volume xli; new series, volume iii. London, 1927.
- *The Great Roll of the Pipe for the fourteenth year of the reign of King Henry the Third, Michaelmas 1230 (Pipe Roll 74). Edited by Chalfant Robinson. $9\frac{1}{2} \times 6$. Pp. xxxii + 466. Publications of the Pipe Roll Society, volume xlii; new series, volume iv. Princeton University Press, 1927.
- *Guide to Archives and other collections of documents relating to Surrey. Parish Records, civil and ecclesiastical, by Miss D. L. Powell. 10 x 6 $\frac{1}{2}$. Pp. viii + 130. Surrey Record Society, no. 26. 1927.
- *King James's Secret: negotiations between Elizabeth and James VI relating to the execution of Mary Queen of Scots, from the Warrender Papers. Edited by Robert S. Rait and Annie I. Cameron. $8\frac{1}{2} \times 5\frac{1}{2}$. Pp. xvii + 214. London: Nisbet, 1927. 12s. 6d.
- *The Boar's Head Tavern in Eastcheap. By Kenneth Rogers. With some account of the parish of St. Michael's, Crooked Lane. Foreword by the Rev. H. J. Fynes-Clinton. $7\frac{1}{2} \times 4\frac{1}{2}$. Pp. 58. London: Homeland Association, 1928.
- *The Student's Guide to the Libraries of London, with an account of the most important archives and other aids to study. By Reginald Arthur Rye. Third edition. $9\frac{1}{2} \times 6$. Pp. xxv + 580. London: University of London Press, 1927. 10s.
- *The Historical Saint Columba. By W. Douglas Simpson. 2nd edition. 10 x 7 $\frac{1}{2}$. Pp. xxiii + 177. Aberdeen: Milne & Hutchison, 1927. 7s. 6d.
- *York Minster Historical Tracts, 627-1927. Edited by A. Hamilton Thompson. $8\frac{1}{2} \times 5\frac{1}{2}$. Not paged. London: S.P.C.K., 1927. 12s. 6d.
- *An Index to the Wills and Administrations (including the 'Infra' Wills) now preserved in the Probate Registry at Chester, for the years 1811-1820, both inclusive. Part I: A to L. Edited by Wm. Assheton Tonge. $8\frac{1}{2} \times 5\frac{1}{2}$. Pp. vii + 327. Lancashire and Cheshire Record Society, vol. lxxviii. 1928.
- *De Nordiska Folkstammarna. I. Beowulf. Av Elias Wessén. $9\frac{1}{2} \times 6\frac{1}{2}$. Pp. 86. Kungl. Vitterhets Historie och Antikvitets Akademiens Handlingar. Del 36: 2. Stockholm, 1927. 3 kr.
- *Early Holborn and the Legal Quarter of London. By E. Williams. Two volumes. $9\frac{1}{2} \times 7\frac{1}{2}$. Pp. xv + [732]; viii + [754]. London: Sweet & Maxwell, 1927. £5 5s.

- *The Registers of Marriages of St. Mary le Bone, Middlesex, 1809-1812. Edited by W. Bruce Bannerman. Part ix. $10\frac{1}{2} \times 6\frac{3}{4}$. Pp. viii + 173. Harleian Society's Publications, vol. 57. 1927.
- *Government of Northern Ireland. Report of the Deputy Keeper of the Records for the year 1926. $9\frac{1}{2} \times 6$. Pp. 42. Belfast: Stationery Office, 1927. 1s.

Indian Archaeology.

- *Les Antiquités Bouddhiques de Bāmiyān. Par A. Godard, Y. Godard, J. Hackin, avec des notes additionnelles de M. Paul Pelliot. 15 x 11. Pp. iv + 116. Mémoires de la Délégation archéologique française en Afghanistan, tome ii. Paris and Brussels: Van Oest, 1928.
- *Fragment of a Prajnaparamita Manuscript from Central Asia. By Pandit B. B. Bidyabinod. 13 x 10. Pp. iv + 13. Memoirs of the Archaeological Survey of India, no. 32. Calcutta, 1927. 3s.
- *The beginnings of Art in Eastern India, with special reference to sculptures in the Indian Museum, Calcutta. By Ramaprasad Chanda. 13 x 10. Pp. viii + 54. Memoirs of the Archaeological Survey of India, no. 30. Calcutta, 1927. 5s. 9d.

Irish Archaeology.

- *The Archaeology of Ireland. By R. A. S. Macalister. $8\frac{3}{4} \times 5\frac{1}{2}$. Pp. xvi + 373. London: Methuen, 1928. 16s.

Law.

- *A revised manual of Roman Law founded upon the Ecloga of Leo III and Constantine V of Irania. *Ecloga Privata Aucta*. Rendered into English by Edwin H. Freshfield. $8\frac{1}{2} \times 5\frac{1}{2}$. Pp. xii + 120. Cambridge: printed at the University Press, 1927.

Manuscripts.

- *English Illuminated Manuscripts of the fourteenth and fifteenth centuries. By Eric G. Millar, F.S.A. $14\frac{1}{2} \times 10\frac{1}{2}$. Pp. xi + 107, with 101 plates. Paris and Brussels: Vanoest, 1927. £4 4s.
- *Miniatures from a French Horae, British Museum Add. MS. 16997, fifteenth century, reproduced in honour of John Alexander Herbert. $8\frac{1}{2} \times 6\frac{1}{4}$. Pp. 16, with 20 plates. Printed for the subscribers, 26 November 1927.
- *The Caedmon Manuscript of Anglo-Saxon Biblical Poetry, Junius XI in the Bodleian Library. With introduction by Sir Israel Gollancz. $16 \times 11\frac{1}{4}$. Pp. cxxvii + 230. Published for the British Academy by Humphrey Milford, Oxford University Press, 1927. £10 10s.
- *Catalogue of the Manuscripts of Lincoln Cathedral Chapter Library. Compiled by Reginald Maxwell Woolley, D.D. $8\frac{1}{2} \times 5\frac{3}{4}$. Pp. xxiv + 190. Oxford University Press, 1927. 18s.

Maps.

- *A Descriptive List of the printed maps of Norfolk, 1574-1919, with biographical notes and a tabular index. By T. Chubb. And a descriptive list of Norwich plans, 1541-1914, by George A. Stephen. $8\frac{3}{4} \times 5\frac{1}{2}$. Pp. xvi + 289. Norwich: Jarrold, 1928. £1 5s.

Monastic.

- *Five Centuries of Religion. By G. G. Coulton. Vol. ii. The Friars and the dead weight of tradition, 1200-1400 A. D. $9 \times 5\frac{3}{4}$. Pp. xxx + 703. Cambridge: at the University Press, 1927. 31s. 6d.
- *Cartulario del Monasterio de Vega con documentos de San Pelayo y Vega de Oviedo. Por D. Luciano Serrano, O.S.B. $9\frac{1}{2} \times 6\frac{3}{4}$. Pp. xxxii + 212. Madrid: Junta para Ampliación de Estudios, 1927. 12 pesetas.

Monuments.

- *English Monumental Sculpture since the Renaissance. By Katherine A. Esdaile. $8\frac{1}{2} \times 5\frac{1}{2}$. Pp. xvi + 179. London: S.P.C.K., 1927. 10s. 6d.

- *Monumental Inscriptions in the churchyard and church of All Saints, Lydd, Kent. By Leland L. Duncan. Edited by Arthur Finn. $8\frac{3}{4} \times 5\frac{3}{4}$. Pp. ix + 68. Kent Archaeological Society, Records Branch, 1927.
- *The Monumental Inscriptions of the British West Indies. Collected and edited by Vere Langford Oliver. $10\frac{3}{4} \times 7\frac{1}{2}$. Pp. iv + 267. Dorchester: Longman, 1927.

Numismatics.

- *Satirical and Controversial Medals of the Reformation. The biceps or double-headed series, by Francis Pierrepont Barnard. $10 \times 7\frac{1}{2}$. Pp. iv + 45, with 6 plates. Oxford: at the Clarendon Press, 1927. 21s.

Painting.

- *English Medieval Painting. By Tancred Borenius and E. W. Tristram. 12×9 . Pp. ix + 66, with 101 plates. Paris: Pegasus Press, 1927. £4 4s.
- *Victoria and Albert Museum. Catalogue of Water Colour Paintings by British artists and foreigners working in Great Britain. Revised edition. $8\frac{1}{2} \times 5\frac{1}{4}$. Pp. xiv + 636. London: Stationery Office, 1927. 5s.
- *Monuments de l'Athos. Relevés avec le concours de l'Armée Française d'Orient et de l'École Française d'Athènes et publiés avec une introduction et un catalogue par Gabriel Millet. I. Les Peintures. $15\frac{1}{2} \times 11\frac{1}{2}$. Pp. 75 and 264 plates. Paris: Leroux, 1927.

Plate.

- *Seventeenth century Tea spoons. By Francis Buckley. $8\frac{3}{4} \times 5\frac{3}{4}$. Pp. 8. Privately printed, 1928.

Prehistoric Archaeology.

- *The Circle and the Cross: a study in continuity. By A. Hadrian Allcroft. In two volumes. Vol. i. The Circle. $8\frac{3}{4} \times 5\frac{3}{4}$. Pp. x + 370. London: Macmillan, 1927. 12s. 6d.
- *Hällristningar och Kultbruk. Bidrag till belysning av de Nordiska Bronsåldersristningarnas innebörd. Av Oscar Almgren. $9\frac{1}{2} \times 6\frac{1}{4}$. Pp. 337. Kungl. Vitterhets Historie och Antikvitets Akademiens Handlingar, Del 35. Stockholm, 1927. 15 kr.
- *De Förhistoriska Tiderna i Europa. Skildrade av T. J. Arne, Chr. Blinkenberg, A. W. Brøgger, Knud Jessen, K. Friis Johansen, C. A. Nordman och Haakon Shtelig, under redaktion av K. Friis Johansen. Andra Delen: Mellan-, Väst- och Nordeuropa. $9\frac{1}{2} \times 6$. Pp. 440. Stockholm: Norstedt, 1927. 15 kr.
- *The Pottery from the Long Barrow at West Kennet, Wilts. Compiled by M. E. Cunningham. $9\frac{1}{2} \times 7\frac{1}{4}$. Pp. ii + 19, with 13 plates. Devises: Simpson, 1927. For private circulation.
- *Der Urnenfriedhof auf der Schanze bei Grossromstedt. Von Dr. G. Eichorn. 10×7 . Pp. viii + 322. Mannus-Bibliothek, no. 4. Leipzig, 1927.
- *The Druids: a study in Celtic prehistory. By T. D. Kendrick. $8\frac{3}{4} \times 5\frac{3}{4}$. Pp. xv + 227. London: Methuen, 1927. 12s. 6d.
- *The Iron Age in Italy. A study of those aspects of the early civilization which are neither Villanovan nor Etruscan. By David Randall-MacIver. $11 \times 8\frac{1}{2}$. Pp. xv + 243 + v. Oxford: at the Clarendon Press, 1927. £4 4s.
- *The Antiquity of Man in East Anglia. By J. Reid Moir. $9\frac{1}{4} \times 6\frac{1}{4}$. Pp. xiv + 172. Cambridge: at the University Press, 1927. 15s.
- *Gotlands Stenåldersboplatser. Av John Niklén. $9\frac{1}{2} \times 6\frac{1}{4}$. Pp. 239. Kungl. Vitterhets Historie och Antikvitets Akademiens Handlingar, Del 36:3. Stockholm, 1927. 6 kr.
- *Corpus des signes gravés des monuments mégalithiques du Morbihan. Par Marthe et Saint-Just Péquart et Zacharie Le Rouzic. $10 \times 8\frac{1}{2}$. Pp. xii + 108, with 138 plates. Paris: Picard, 1927.
- *Primitive Culture in Italy. By H. J. Rose. $7\frac{1}{2} \times 4\frac{3}{4}$. Pp. ix + 253. London: Methuen, 1927. 7s. 6d.

Roman Archaeology.

- *A Dunapentelei Római Telep: Die Römische Ansiedlung von Dunapentele (Intercisa), von Stefan Paulovics. *Archaeologica Hungarica*, vol. 2. $12\frac{1}{4} \times 9\frac{1}{4}$. Pp. 130. Budapest: Stemmer, 1927.

Seals.

- *Seal of the Charter of William I. Report of the Library Committee to the Common Council of the City of London, 15th December 1927. $13\frac{1}{4} \times 8\frac{1}{4}$. Pp. 3.

Weights and Measures.

- *Old English Bronze Wool-weights. By Major Herbert C. Dent. $8\frac{1}{4} \times 5\frac{1}{4}$. Pp. 32, with 29 plates. Norwich: Hunt, 1927. 10s. 6d.

Proceedings of the Society of Antiquaries

Thursday, 17th November 1927. The Earl of Crawford and Balcarres, K.T., F.R.S., President, in the Chair.

Mr. H. E. Balch, F.S.A., read a paper on recent excavations at Wookey Hole and its neighbourhood (see p. 193).

Mr. W. H. Quarrell, F.S.A., exhibited a silver flagon once belonging to St. Thomas's church, Winchester, which has since been restored to that church.

Thursday, 24th November 1927. The Earl of Crawford and Balcarres, K.T., F.R.S., President, in the Chair.

Messrs. T. Davies Pryce, F.S.A., and Felix Oswald, F.S.A., read a paper on Roman London: its initial occupation as evidenced by early types of Samian ware, which will be printed in *Archaeologia*.

Thursday, 1st December 1927. The Earl of Crawford and Balcarres, K.T., F.R.S., President, in the Chair.

A letter was read from Mrs. Hogarth thanking the Fellows for the message of condolence sent to her on the death of her husband.

On the motion of the President it was unanimously resolved that the Society contribute one hundred guineas to the Stonehenge Land Purchase Fund.

Mr. A. W. Clapham, F.S.A., read a paper on an early hall at Chilham Castle, which will be published in the *Antiquaries Journal*.

Mr. W. D. Carøe, F.S.A., exhibited a cross-head from Berrow church, Somerset (see p. 211).

Mr. H. C. Beck, F.S.A., read a paper on early magnifying glasses, which will be published in the *Antiquaries Journal*.

The Mayor and Corporation of Pontefract exhibited the seals of the Office of Mayoralty of the borough (see p. 240).

Thursday, 8th December, 1927. The Earl of Crawford and Balcarres, K.T., F.R.S., President, in the Chair.

Dr. R. E. M. Wheeler, F.S.A., and Mr. J. R. Gabriel read a paper on a Roman burial of unusual type from Caerleon, which will be published in the *Antiquaries Journal*.

Dr. W. L. Hildburgh, F.S.A., exhibited some medieval English alabasters and ecclesiastical metal-work, which will be published in the *Antiquaries Journal*.

Mr. V. B. Crowther-Beynon, F.S.A., exhibited a plumbago miniature of Charles II by David Paton after Samuel Cooper.

Thursday, 15th December 1927. The Earl of Crawford and Balcarres, K.T., F.R.S., President, in the Chair.

A special vote of thanks was passed to Dr. W. L. Hildburgh, F.S.A., for his gift of the Shakespeare Head edition of Froissart's Chronicles.

Dr. W. G. Black, C.B.E., was admitted a Fellow.

Mr. J. R. H. Weaver read a paper on some problems of Romanesque architecture in Spain.

Thursday, 12th January 1928. The Earl of Crawford and Balcarres, K.T., F.R.S., President, in the Chair.

Votes of thanks were passed to the Editors of the *Builder*, *Notes and Queries*, and the *Indian Antiquary* for the gift of their publications during the past year.

Sir Ivor Atkins and Captain E. G. Spencer-Churchill were admitted Fellows.

Mr. L. A. Lawrence exhibited a case of surveyor's scales and weights, probably Dutch, dated 1596.

The following were elected Fellows: Mr. Richard Perry Bedford, Mr. Walter Tapper, A.R.A., P.R.I.B.A., Mr. James Logan Mack, the Rev. Roderick Dew, M.A., Mr. Edward Toulmin Nicolle, Mr. Frank Bentham Stevens, LL.B., Mr. Charles Hugh Chalmers, Canon Arthur Thomas Bannister, M.A., Mr. Thomas Wyatt Bagshawe, Mr. Richard Williams, M.R.C.S., L.R.C.P., Mr. Beauchamp Wadmore, and Mr. Horace Blackley.

Thursday, 19th January 1928. The Earl of Crawford and Balcarres, K.T., F.R.S., President, in the Chair.

Messrs. A. J. Hawkes, T. W. Bagshawe, and E. C. Treplin were admitted Fellows.

Mr. P. M. Johnston, F.S.A., read a paper on recent discoveries of Tudor wall-paintings in houses at Stratford-on-Avon and Oxford, which will be published in the *Antiquaries Journal*.

Thursday, 26th January 1928. The Earl of Crawford and Balcarres, K.T., F.R.S., President, in the Chair.

The Rev. Roderick Dew and Mr. Walter Tapper were admitted Fellows.

Messrs. F. W. Pixley, P. D. Griffiths, A. W. Clapham, and W. Longman were appointed auditors of the Society's accounts for the year 1927.

Dr. R. E. M. Wheeler, F.S.A., read a paper on the Amphitheatre at Caerleon, which will be printed in *Archaeologia*.

Thursday, 2nd February 1928. The Earl of Crawford and Balcarres, K.T., F.R.S., President, in the Chair.

Mr. Granville Proby was admitted a Fellow.

The following were elected Fellows: Lord Boston, Mr. Roland Austin, M.A., the Very Rev. William Foxley Norris, D.D., Dean of Westminster, Mr. Harry Pirie-Gordon, D.Sc., Mr. Cyril John Gadd, M.A., Mr. Frank Gordon Gordon, M.A., Mr. Walter Barrow, Sir George Rowland Blades, Bart., G.B.E., M.P., Mr. Henry John Fanshawe Badeley, C.B.E., Major Alexander Gawthrop Wade, M.C., Mr. Granville Tyser, LL.B., and Mr. Herbert Weld; and as Honorary Fellows, M. Paul Deschamps and Professor Michael Ivanovich Rostovtzeff.

Thursday, 9th February 1928. The Earl of Crawford and Balcarres, K.T., F.R.S., President, in the Chair.

The following were admitted Fellows: Mr. Roland Austin, Canon A. W. Goodman, Mr. G. Tyser, Mr. R. P. Bedford, and Mr. Richard Williams.

Mr. Charles ffoulkes, F.S.A., read a paper on the Rotunda Museum and the Tower Armouries, which will be printed in *Archaeologia*.

